



Local Government Energy Audit Report

HMH Bayshore Community Hospital

June 21, 2019

Prepared for:

HMH Bayshore Community Hospital
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Disclaimer

The goal of this audit report is to identify potential energy efficiency opportunities, help prioritize specific measures for implementation, and provide information about financial incentives that may be available. Most energy conservation measures have received preliminary analysis of feasibility that identifies expected ranges of savings and costs. This level of analysis is usually considered sufficient to establish a basis for further discussion and to help prioritize energy measures.

TRC Energy Services (TRC) reviewed the energy conservation measures and estimates of energy savings were reviewed for technical accuracy. Actual, achieved energy savings depend on behavioral factors and other uncontrollable variables and, therefore, estimates of final energy savings are not guaranteed. TRC and the New Jersey Board of Public Utilities (NJBPU) shall in no event be liable should the actual energy savings vary.

TRC bases estimated installation costs on our experience at similar facilities, pricing from local contractors and vendors, and/or cost estimates from RS Means. We encourage the owner to independently confirm these cost estimates and to obtain multiple estimates when considering measure installations. Actual installation costs can vary widely based on individual measures and conditions. TRC and NJBPU do not guarantee installed cost estimates and shall in no event be held liable should actual installed costs vary from estimates.

New Jersey's Clean Energy Program (NJCEP) incentive values provided in this report are estimates based on program information available at the time of the report. Incentive levels are not guaranteed. The NJBPU reserves the right to extend, modify, or terminate programs without prior notice. Please review all available program incentives and eligibility requirements prior to selecting and installing any energy conservation measures.

The customer and their respective contractor(s) are responsible to implement energy conservation measures in complete conformance with all applicable local, state and federal requirements.

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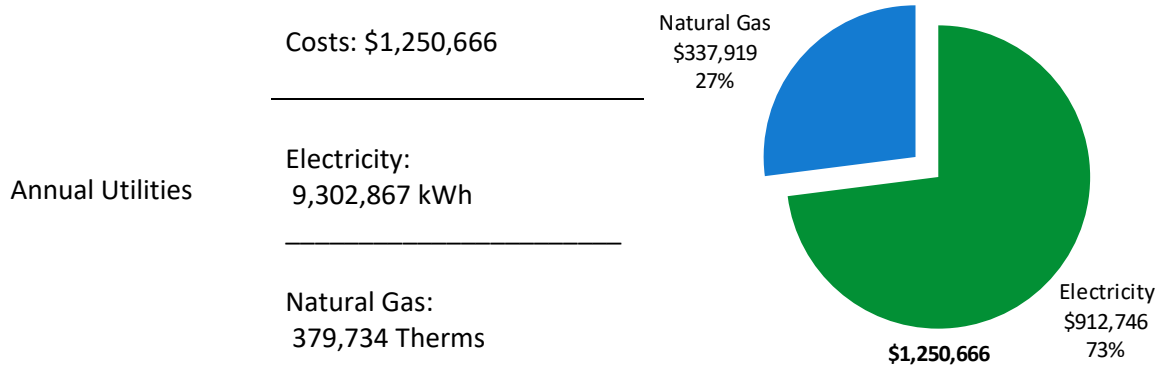
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1 EXECUTIVE SUMMARY

The New Jersey Board of Public Utilities (NJBP) has sponsored this Local Government Energy Audit (LGEA) report for HMH Bayshore Community Hospital. This report provides you with information about your facility's energy use, identifies energy conservation measures (ECMs) that can reduce your energy use, and provides information and assistance to help make changes in your facility. TRC Energy Services (TRC) conducted this study as part of a comprehensive effort to assist New Jersey school districts and local governments in controlling their energy costs and help protect our environment by reducing statewide energy consumption.

BUILDING PERFORMANCE REPORT



<p>ENERGY STAR® Benchmarking Score</p>	<p>65 <i>(1-100 scale)</i></p>	<p>Congratulations, your building performs better than the national average. This report has suggestions about how to keep your building running efficiently, further improve performance and lower your energy bills even more.</p>
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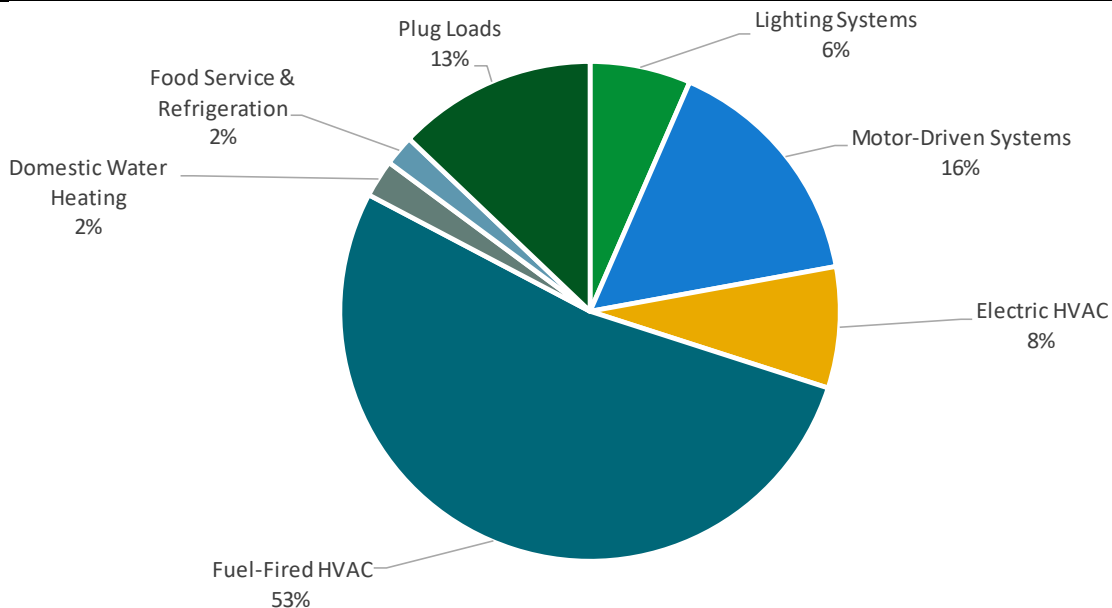


Figure 1 - Energy Use by System

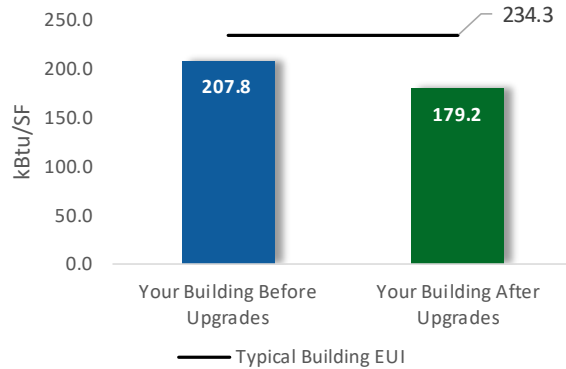
POTENTIAL IMPROVEMENTS



This energy audit considered a range of potential energy improvements in your building. Costs and savings will vary between improvements. Presented below are two potential scopes of work for your consideration.

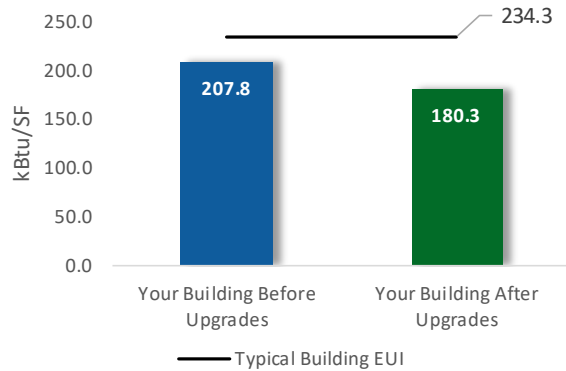
Scenario 1: Full Package (all evaluated measures)

Installation Cost	\$1,535,954
Potential Rebates & Incentives ¹	\$96,221
Annual Cost Savings	\$218,130
Annual Energy Savings	Electricity: 1,957,710 kWh Natural Gas: 29,274 Therms
Greenhouse Gas Emission Savings	1,157 Tons
Simple Payback	6.6 Years
Site Energy Savings (all utilities)	14%



Scenario 2: Cost Effective Package²

Installation Cost	\$1,339,799
Potential Rebates & Incentives	\$96,221
Annual Cost Savings	\$206,927
Annual Energy Savings	Electricity: 1,843,527 kWh Natural Gas: 29,274 Therms
Greenhouse Gas Emission Savings	1,100 Tons
Simple Payback	6.0 Years
Site Energy Savings (all utilities)	13%



On-site Generation Potential

Photovoltaic	High
Combined Heat and Power	High

¹ Incentives are based on current SmartStart Prescriptive incentives. Other Program incentives may apply.

² A cost-effective measure is defined as one where the simple payback does not exceed two-thirds of the expected proposed equipment useful life. Simple payback is based on the net measure cost after potential incentives.

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		463,473	60.3	-76	\$44,801	\$672,011	\$195,583	\$24,591	\$170,992	3.8	457,863
ECM 1	Install LED Fixtures	126,539	21.8	-4	\$12,378	\$185,673	\$144,562	\$16,500	\$128,062	10.3	126,936
ECM 2	Retrofit Fixtures with LED Lamps	336,934	38.5	-71	\$32,423	\$486,338	\$51,021	\$8,091	\$42,930	1.3	330,927
Lighting Control Measures		58,153	6.7	-12	\$5,595	\$44,764	\$30,528	\$3,565	\$26,963	4.8	57,110
ECM 3	Install Occupancy Sensor Lighting Controls	48,495	5.6	-10	\$4,666	\$37,330	\$28,128	\$3,565	\$24,563	5.3	47,625
ECM 4	Install Daylight Dimming Controls	9,658	1.1	-2	\$929	\$7,434	\$2,400	\$0	\$2,400	2.6	9,484
Motor Upgrades		114,182	15.1	0	\$11,203	\$168,044	\$196,155	\$0	\$196,155	17.5	114,981
	Premium Efficiency Motors	114,182	15.1	0	\$11,203	\$168,044	\$196,155	\$0	\$196,155	17.5	114,981
Variable Frequency Drive (VFD) Measures		590,912	96.7	0	\$57,977	\$869,655	\$201,335	\$26,565	\$174,770	3.0	595,044
ECM 5	Install VFDs on Constant Volume (CV) Fans	251,239	36.0	0	\$24,650	\$369,752	\$67,528	\$12,240	\$55,288	2.2	252,995
ECM 6	Install VFDs on Chilled Water Pumps	223,739	47.4	0	\$21,952	\$329,281	\$91,406	\$10,500	\$80,906	3.7	225,303
ECM 7	Install VFDs on Heating Water Pumps	81,756	6.6	0	\$8,021	\$120,322	\$31,580	\$0	\$31,580	3.9	82,328
ECM 8	Install Boiler Draft Fan VFDs	20,768	4.5	0	\$2,038	\$30,564	\$7,214	\$2,325	\$4,889	2.4	20,913
ECM 9	Install VFDs on Kitchen Hood Fan Motors	13,410	2.2	0	\$1,316	\$19,736	\$3,607	\$1,500	\$2,107	1.6	13,504
Electric Chiller Replacement		650,654	306.1	0	\$63,839	\$1,276,773	\$573,686	\$41,100	\$532,586	8.3	655,204
ECM 10	Install High Efficiency Chillers	650,654	306.1	0	\$63,839	\$1,276,773	\$573,686	\$41,100	\$532,586	8.3	655,204
Gas Heating (HVAC/Process) Replacement		0	0.0	2,225	\$19,801	\$396,024	\$295,584	\$0	\$295,584	14.9	260,536
ECM 11	Install High Efficiency Steam Boilers	0	0.0	2,225	\$19,801	\$396,024	\$295,584	\$0	\$295,584	14.9	260,536
HVAC System Improvements		58,074	0.0	790	\$12,730	\$190,944	\$39,423	\$0	\$39,423	3.1	151,001
ECM 12	Implement Demand Control Ventilation (DCV)	58,074	0.0	790	\$12,730	\$190,944	\$39,423	\$0	\$39,423	3.1	151,001
Food Service & Refrigeration Measures		22,261	2.6	0	\$2,184	\$20,110	\$3,660	\$400	\$3,260	1.5	22,416
ECM 13	Refrigerator/Freezer Case Electrically Commutated Motors	9,366	1.2	0	\$919	\$13,784	\$1,820	\$0	\$1,820	2.0	9,432
ECM 14	Vending Machine Control	12,895	1.5	0	\$1,265	\$6,326	\$1,840	\$400	\$1,440	1.1	12,985
TOTALS		1,957,710	487.5	2,927	\$218,130	\$3,638,326	\$1,535,954	\$96,221	\$1,439,733	6.6	2,314,154

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

Figure 2 – Evaluated Energy Improvements

1.1 Planning Your Project

Careful planning makes for a successful energy project. When considering this scope of work, you will have some decisions to make, such as:

- ◆ How will the project be funded and/or financed?
- ◆ Is it best to pursue individual Energy Conservation Measures (ECMs,) groups of ECMs, or use a comprehensive approach where all ECMs are installed together?
- ◆ Are there other facility improvements that should happen at the same time?

Pick Your Installation Approach

New Jersey’s Clean Energy Programs give you the flexibility to do a little or a lot. Rebates, incentives, and financing are available to help reduce both your installation costs and your energy bills. If you are planning to take advantage of these programs, make sure to review incentive program guidelines before proceeding. This is important because in most cases you will need to submit applications for the incentives before purchasing materials or starting installation.

The potential ECMs identified for this building likely qualify for multiple incentive and funding programs. Based on current program rules and requirements, your measures are likely to qualify for the following programs:

Energy Conservation Measure		SmartStart	Direct Install	Pay For Performance
ECM 1	Install LED Fixtures	X		X
ECM 2	Retrofit Fixtures with LED Lamps	X		X
ECM 3	Install Occupancy Sensor Lighting Controls	X		X
ECM 4	Install Daylight Dimming Controls			X
ECM 5	Install VFDs on Constant Volume (CV) HVAC	X		X
ECM 6	Install VFDs on Chilled Water Pumps	X		X
ECM 7	Install VFDs on Hot Water Pumps			X
ECM 8	Install Boiler Draft Fan VFDs	X		X
ECM 9	Install VFDs on Single-Speed Kitchen Hoods	X		X
ECM 10	Install High Efficiency Chillers	X		X
ECM 11	Install High Efficiency Steam Boilers			X
ECM 12	Implement Demand Control Ventilation			X
ECM 13	Refrigerator/Freezer Case Electrically Commutated Motors			X
ECM 14	Vending Machine Control	X		X

Figure 3 – Funding Options



New Jersey's Clean Energy Programs At-A-Glance

	SmartStart Flexibility to install at your own pace	Direct Install Turnkey installation	Pay for Performance Whole building upgrades
Who should use it?	Buildings installing individual measures or small group of measures.	Small to mid-size facilities that can bundle multiple measures together. Average peak demand should be below 200 kW. Not suitable for significant building shell issues.	Mid to large size facilities looking to implement as many measures as possible at one time. Peak demand should be over 200 kW.
How does it work?	Use in-house staff or your preferred contractor.	Pre-approved contractors pass savings along to you via reduced material and labor costs.	Whole-building approach to energy upgrades designed to reduce energy use by at least 15%. The more you save, the higher the incentives.
What are the Incentives?	Fixed incentives for specific energy efficiency measures.	Incentives pay up to 70% of eligible costs, up to \$125,000 per project. You pay the remaining 30% directly to the contractor.	Up to 25% of installation cost, calculated based on level of energy savings per square foot.
How do I participate?	Submit an application for the specific equipment to be installed.	Contact a participating contractor in your region.	Contact a pre-qualified partner to develop your energy reduction plan and set your energy savings targets.

Take the next step by visiting www.njcleanenergy.com for program details, applications, and to contact a qualified contractor.

Individual Measures with SmartStart

For facilities wishing to pursue only selected individual measures (or planning to phase implementation of selected measures over multiple years), incentives are available through the SmartStart program. To participate, you can use internal resources or an outside firm or contractor to perform the final design of the ECM(s) and install the equipment. Program pre-approval is required for some SmartStart incentives, so only after receiving pre-approval should you proceed with ECM installation.

Turnkey Installation with Direct Install

The Direct Install program provides turnkey installation of multiple measures through an authorized network of participating contractors. This program can provide substantially higher incentives than SmartStart, up to 70% of the cost of selected measures. Direct Install contractors will assess and verify individual measure eligibility and, in most cases, they perform the installation work. The Direct Install program is available to sites with an average peak demand of less than 200 kW.

Whole Building Approach with Pay for Performance

Pay for Performance can be a good option for medium to large sized facilities to achieve deep energy savings. Pay for Performance allows you to install as many measures as possible under a single project as well as address measures that may not qualify for other programs. Many facilities pursuing an Energy Savings Improvement Program loan also use this program. Pay for Performance works for larger customers with a peak demand over 200 kW. The minimum installed scope of work must include at least two unique measures resulting in at least 15% energy savings, where lighting cannot make up the majority of the savings.

More Options from Around the State

Financing and Planning Support with the Energy Savings Improvement Program (ESIP)

For larger facilities with limited capital availability to implement ECMs, project financing may be available through the ESIP. Supported directly by the NJBPU, ESIP provides government agencies with project development, design, and implementation support services, as well as, attractive financing for implementing ECMs. You have already taken the first step as an LGEA customer, because this report is required to participate in ESIP.

Resiliency with Return on Investment through Combined Heat & Power (CHP)

The CHP program provides incentives for combined heat and power (aka cogeneration) and waste heat to power projects. Combined heat and power systems generate power on-site and recover heat from the generation system to meet on-site thermal loads. Waste heat to power systems use waste heat to generate power. You will work with a qualified developer who will design a system that meets your building's heating and cooling needs.

Ongoing Electric Savings with Demand Response

The Demand Response Energy Aggregator program reduces electric loads at commercial facilities when wholesale electricity prices are high or when the reliability of the electric grid is threatened due to peak power demand. By enabling commercial facilities to reduce their electric demand during times of peak demand, the grid is made more reliable and overall transmission costs are reduced for all ratepayers. Curtailment service providers provide regular payments to medium and large consumers of electric power for their participation in demand response (DR) programs. Program participation is voluntary, and facilities receive payments regardless of whether they are called upon to curtail their load during times of peak demand.

2 EXISTING CONDITIONS

The New Jersey Board of Public Utilities (NJBP) has sponsored this Local Government Energy Audit (LGEA) Report for HMH Bayshore Community Hospital. This report provides information on how your facility uses energy, identifies energy conservation measures (ECMs) that can reduce your energy use, and provides information and assistance to help you implement the ECMs. This report also contains valuable information on financial incentives from New Jersey’s Clean Energy Program (NJCEP) for implementing ECMs.

TRC conducted this study as part of a comprehensive effort to assist New Jersey educational and local government facilities in controlling energy costs and protecting our environment by offering a wide range of energy management options and advice.

2.1 Site Overview

On December 4, 2018, TRC performed an energy audit at HMH Bayshore Community Hospital located in Holmdel, New Jersey. TRC met with Gary Sypniewski and Lewis Tedesco to review the facility operations and help focus our investigation on specific energy-using systems.

HMH Bayshore Community Hospital is five story, 335,494 square foot building built in 1970. Spaces include private rooms, ICUs, operation theater, medical records, pharmacy, laboratories, outpatient clinics, X-ray, CT, and MRI rooms, as well as an emergency department. There are several other spaces typical to hospital.

The hospital has recently upgraded lighting in about 50% of the areas with LED 2x2 and 2x4 fixtures on the second and third floors as well as the ICU section. The rest of the areas are lit by linear fluorescents and compact fluorescent lights.

Heating is provided by two large steam boilers (circa 1970) providing hot water via a heat exchanger supplying to air handling units (AHUs) located throughout the facility. Space cooling is achieved by a total of 5 chillers (1,090 TR total) and a few DX units located on the roof. Most of the HVAC (Heating Ventilation and Air Conditioning) systems have passed its useful life and in need of replacement as identified in the Energy Conservation Measures (ECMs) described later in this report.

2.2 Building Occupancy

Being a hospital, the facility is open 24 hours a day, seven days a week, all year. Excluding the admitted patients, the hospital is occupied by about 450 staff daily. These includes doctors, nurses, maintenance, and housekeeping staff.

Building Name	Weekday/Weekend	Operating Schedule
HMH Bayshore Community Hospital	Weekday	Open 24 hours
	Weekend	Open 24 hours

Figure 4 - Building Occupancy Schedule

2.3 Building Envelope

Building walls are made of concrete masonry units (CMUs) with a brick veneer and plaster drywall interior finish.

All areas of the facility are under a flat roof and supported with steel trusses and a metal deck and finished with an insulated layer and a covering of EPDM membrane.

Overall the building envelope appears to be in good shape with no excess outside air infiltration.

Most of the windows are double glazed with low-e glass and have aluminum frames with a thermal break. The glass-to-frame seals are in good condition. The operable window weather seals are in good condition, showing little evidence of excessive wear. Exterior doors have aluminum frames and are in fair condition with undamaged door seals. The main entrance doors are double sliding, four-feet wide, and appear to be in good condition.



Image 1: Building Exterior Envelope



Image 2: Roof with EPDM Membrane

2.4 Lighting Systems

The facility has recently upgraded majority of light fixtures to LED fixtures which saves significant energy over the fluorescent lights. There are a variety of these fixtures ranging from 30 Watts (W) to 50 Watt and 2X2, and 2X4 ambient fixtures. These are in the ICU section, second and third floors, private rooms, hallways, cafeteria, emergency department, central sterile etc.

A substantial quantity of the facility's lights also consists of linear T8 fluorescent light fixtures with 32W lamps and electronic ballasts. Fixture types include 2- 3- or 4-lamp, 2-or 4-foot long troffers and recessed fixtures as well as 2x2 U-bend tube lamps fixtures.

In addition to the above there are several other types of light fixtures such as pin based and screw in compact fluorescents lights (CFL), incandescent, and HID lights including metal halides. These lights are located mainly in the emergency department, hallways, common areas, waiting rooms, and examination rooms.

Since the facility is open 24 hours a day year-round, most lights are on continuously. The majority of the interior lights are controlled via switches or circuit breakers. Occupancy sensors are installed in a few areas, such as restrooms and staff offices.

Exterior lighting consists of primarily metal halide lights ranging from 70W to 250W. There are some pole mounted LED fixtures rated at a 100W illuminating the parking lots. All exterior lights are controlled by photocells.



Image 3: 2X4 LED Fixture



Image 4: 2X2 LED Fixture

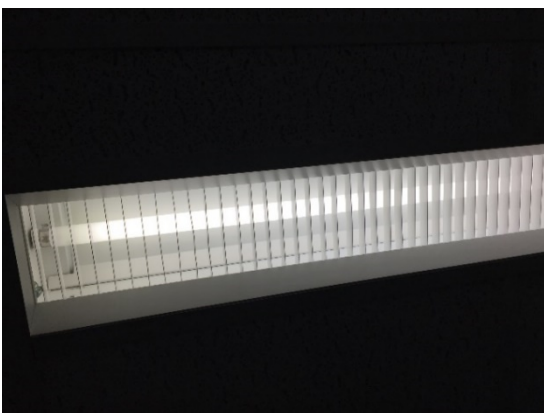


Image 5: T8 Lamp



Image 6: Screw-in LED Fixture

2.5 Air Handling Systems

There is a total of 32 air handling units (AHUs) located in 11 mechanical rooms and drop ceilings that provide heating and cooling to the various spaces. The AHUs are (labeled 1 through 39) and except for AHU39 the rest of the units are served by the hot water from the steam boilers and chilled water from one of the five chillers. AHU 39 is a York unit with its own DX cooling compressors and serves the Cardiac Catheterization department.

AHU 1 through 16, and AHU 20 through 38 are all constant air volume (CAV) systems with a single speed supply and return fan motors. The remaining AHU 17, 18, and 39 are variable air volume (VAV) system with a VFD driven supply and return. Furthermore AHU 5, 6, 7, and 8 are 100% outside air units with no dedicated return fans. The supply fan horse power (HP) rates range in size from ½ hp to 25 hp. Approximate age of the units vary significantly as well from two-year-old (AHU 15-21) to 45-year-old (AHU 3-6). Please refer to Appendix A for capacities, make, model of each AHU and the areas they serve.

All units are controlled by the central Energy Management System (EMS) and run continuously. Typical of a hospital, there are sensors located in each patient room and operating room (OR) that maintain positive or negative pressurization based on the requirement. During the audit the site contact expressed interest in installing demand controlled ventilation in certain areas such as OR rooms, which are not occupied continuously so the units serving those could be ramped down when unoccupied. Please refer to ECM 12 for more details.

In addition to the AHUs there are two Liebert® split system air conditioning (AC) units rated at two-ton each with an EER of 10.3 that serve the data center on site.

A 3.5-ton Mitsubishi® split system heat pump serving a private office area rated at SEER 17.6 (cooling efficiency) and a COP of 3.4 (heating efficiency).

The York® condensing system dedicated to AHU39 is located on the roof; rated at 52 tons with a SEER of 13.9.

Air is exhausted from the facility via a total of 65 exhaust fans with motors ranging in size from 1/3 to 7.5 hp. Like the supply fans, most exhaust fans also operate continuously like the supply fans. Where appropriate, motor replacements have been recommended for the exhaust fans.



Image 7: AHU30 Located in M.E.R. 8



Image 8: AHU 39 Located on the Roof

2.6 Heating Systems

The facility space heating and sterilization needs are served by two Superior, 8,625 MBh steam boilers that were installed circa 1970. The burners are non-modulating with a constant speed 7.5 hp fan motor. The boilers are over 49-years-old and estimated to be operating between 78-80% combustion efficiencies. The boilers are configured in an automated lead-lag control scheme. Based on the facility gas consumption, it is clear that the heating system is oversized and only one boiler is required under normal operating conditions. Both boilers have passed their useful life and there is significant opportunity for energy savings as described in ECM 11 of this report.

The boilers supply 55 PSI high pressure steam to multiple heat exchangers throughout the facility which convert steam to 180 F heating hot water. The hot water is then circulated via two constant speed 25 hp primary heating pumps to the various AHUs located throughout the facility. There are other fractional hp circulator pumps located in various mechanical rooms to maintain water pressure to the AHUs.

Hot water is supplied at 180°F when the outside air temperature is low, and the setpoint is adjusted linearly to 100°F when the outside air is above 60°F. The hot water return temperature is typically 160°F. The boilers are controlled via the Schneider Electric/ Andover Continuum EMS and are monitored by a staff on a continuous basis.

In addition to space heating the boilers also serve three steam sterilizers, which are used for the decontamination of equipment and instruments by hospital staff in the operating rooms. A small sterilizer is rated at 180 lbs. steam/hr; a larger one is rated at 190 lbs. steam/hr. The third sterilizer located in the OR is rated at 96 lbs. steam/hours. The sterilization process is a constant year long process and as a result one of the boilers must remain on line all year long.



Image 9: (2) Superior Steam Boilers



Image 10: 7 1/2 hp Boiler Blower Motor



Image 11: (2) 25 hp Heating Hot Water Pumps

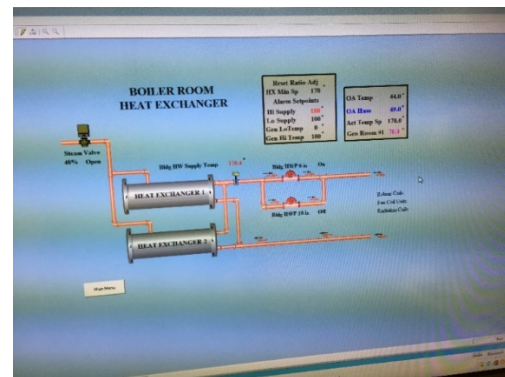


Image 12: EMS Controls for Boiler

2.7 Chilled Water Systems

The facility has a total of five chillers supplying chilled water (CHW) to the various AHU systems located throughout. Two of the chillers (CH1 and CH2) are Carrier® water cooled machines rated at 400 and 300 tons respectively. The 400-ton CH1 is a model 23XRV variable speed chiller that was recently installed located in the boiler room. The 300-ton CH2 chiller is an old 19DK model located in mechanical equipment room (MER) number eight and has passed its useful life. CH2 is used as a base load chiller during peak operations while CH1, which is a VFD chiller, is used a trimming machine.

Located outside MER number eight are two Trane® air-cooled screw chillers (CH3 and CH4) rated at 140 and 130 tons respectively. CH3 serves the administration offices and lab/lab offices while CH4 serves the Ambulatory Imaging, the Radiology Pavilion, and basement floor. Both CH3 and CH4 are two-stage with constant speed compressors.

Chiller number five (CH5) is a 125-ton Trane® unit and the same make and model as the Trane® CH4. CH5 is located on the roof and serves the emergency department (ED).

All chillers except CH1 have passed their useful life and should be considered for replacement.

The chilled water is distributed to the AHU coils via several chilled pumps located in each mechanical room. They range in size from 5 hp to 40 hp. All CHW pumps are constant speed installed in pairs, operating one at a time in a lead/lag arrangement.

The chilled water supply temperature is reset (modulated) based on outside air temperature. Chilled water is distributed at 42°F when the outside air temperature is above 60°F and the setpoint is reset to 50°F when the outside air is below 55°F. The chiller plant is locked out when the outside air temperature is below 45°F, and it is turned off from mid-December through February.

The condenser water system consists of two one-cell newly installed Evapco® cooling towers. Water is circulated to both towers. Each tower has two fan motors equipped with VFDs that are both rated at 40 hp. Fan motors are staged based on maintaining basin water temperature. Condenser water is supplied to the chillers by two 25 constant flow pumps (CWP1 and CWP2). The condenser water temperature is reset with water supplied at 80°F when the outside air temperature is above 70°F and the setpoint is reset to 65°F when the outside air is below 55°F.



Image 13: New CH1 Located in Boiler Room



Image 14: Trane CH3 and CH4 Outside M.E.R. 8



Image 15: Evapco Cooling Tower



Image 16: (2) 25 hp Condenser Water Pumps

2.8 Building Energy Management Systems (EMS)

The facility has a Schneider Electric/Andover Continuum™ EMS system that controls the HVAC equipment, boilers, chillers, air handlers, and package units. The EMS provides equipment scheduling control and monitors and controls space temperatures, supply air temperatures, humidity, heating water loop temperatures and chilled water loop temperatures. A dedicated staff is on hand to control and or make any changes to the EMS if it is needed or requested by occupants.

A secondary Johnson Control® EMS controls AHUS three through ten, AHU 12, AHU 29, and AHU 33. The Johnson Control® EMS is similar in functionality as the Andover system.

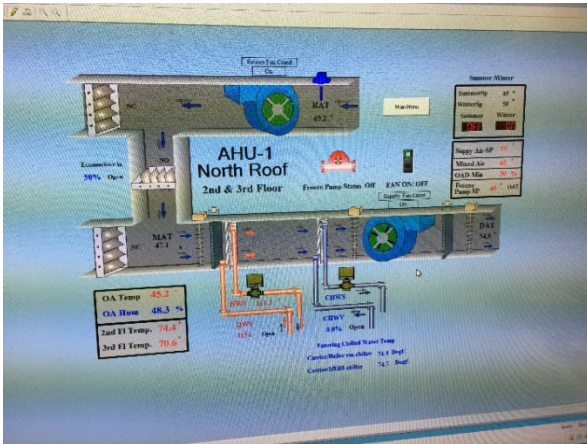


Image 17: Andover EMS Interface

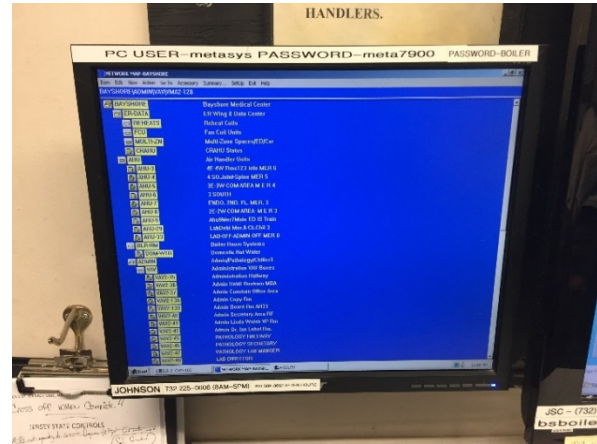


Image 18: Johnson Control EMS Interface

2.9 Domestic Hot Water

Hot water is produced by a heat exchanger using steam from the space heating boiler and stored in two Patterson-Kelley® 500-gallon storage tanks. The domestic water heaters were set at 120°F supply water temperature.

Two 5 hp circulation pumps distribute water to end uses. The circulation pumps operate continuously.

The domestic hot water pipes are well insulated and the insulation is in good condition.



Image 19: DHW Storage Tanks



Image 20: DHW Supply Pumps

2.10 Food Service Equipment

The facility has a full-service kitchen and cafeteria that serve the staff and visitors. The kitchen is open from 6:00 AM to 2:00 AM daily.

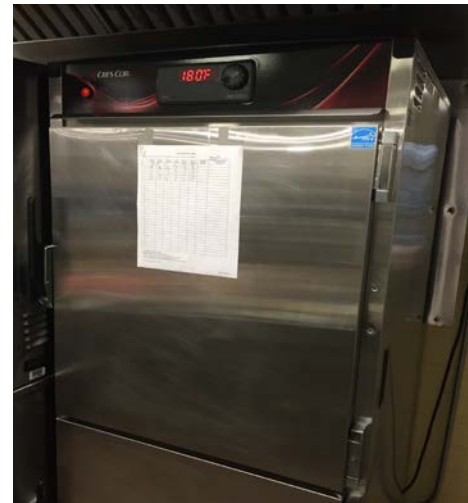
The kitchen has mixed gas and electric equipment that is used to prepare meals, breakfasts, lunches, dinners for patients, staff and visitors. Most cooking is done using a conventional gas-fired oven and a gas fired stove/range. Bulk prepared foods are held in several electric holding cabinets. Equipment is generally high efficiency and is in good condition.

The dishwasher is a non-ENERGY STAR® high temperature, rack type unit.

Visit https://www.energystar.gov/products/commercial_food_service_equipment for the latest information on high efficiency food service equipment.



Image 21: Kitchen Equipment



*Image 22: Kitchen Equipment EnergyStar®
Rated Oven*

2.11 Refrigeration

The kitchen has several stand-up refrigerators with either solid or glass doors. There is also an ENERGY STAR® rated stand-up solid door freezer and refrigerator. There is a freezer chest as well as many refrigerator chests. All equipment is high efficiency and in good condition.

The walk-in refrigerator has an estimated 0.5-ton compressor and a 500W fan evaporator and is in the process of being replaced.

Two walk-in medium temperature freezers have a 0.44-ton compressor located and an estimated 835W evaporator motor. Based on the age of the equipment, the motor is assumed to be permanent split capacitor (PSC) type and has been recommended for replacement. The controls for the walk-ins are also basic allowing the units to operate constantly. New controls available have capability to only cycle the compressors on as needed based on indoor and outdoor air temperature and humidity conditions.

Visit https://www.energystar.gov/products/commercial_food_service_equipment for the latest information on high efficiency food service equipment.



Image 23: Kitchen Equipment EnergyStar® Rated Solid Door Freezer



Image 24: Kitchen Equipment Walk-in Freezer

2.12 Plug Load & Vending Machines

The utility bill analysis indicates that plug loads consume approximately 12.87% percent of total building energy use. This is higher than a typical building but expected for a hospital facility primarily due to the significant number of plug loads present. These include patient room equipment, monitors, X-ray machines, CT, MRI, freezers, coolers, vacuum pump, laundry equipment, lab hoods, etc.

Apart from the above there are approximately 72 LED TV sets, 15 coffee makers, 11 microwaves, and 41 printers and copiers. Plug loads throughout the building also include general café and office equipment.

There are several residential style refrigerators throughout the building. These vary in condition and efficiency.

You may wish to consider paying particular attention to minimizing your plug load usage. This report makes suggestions for ECMs in this area as well as Energy Efficient Best Practices.

There are eight refrigerated beverage vending machines and four non-refrigerated vending machines. Vending machines are not equipped with occupancy-based controls.



Image 25: Kitchen Equipment Medicine Dispenser

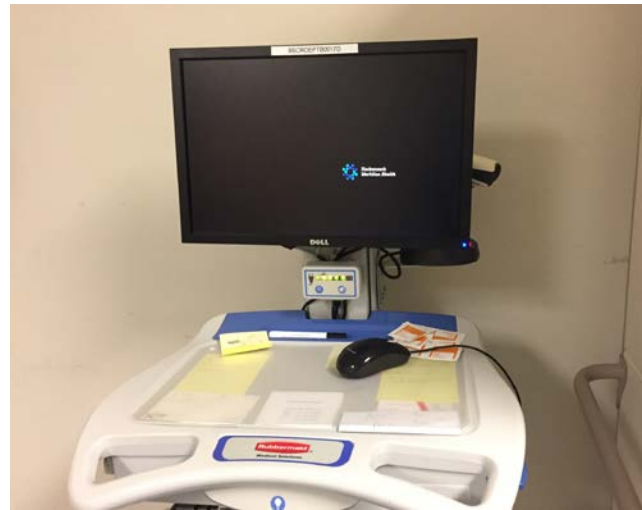


Image 26: Kitchen Equipment Portable Nursing Station



Image 27: Kitchen Equipment MRI Machine



Image 28: Kitchen Equipment Biological Safety Cabinet

2.13 Water-Using Systems

There are about 20 restrooms with toilets, urinals, and sinks. Faucet flow rates are at 0.5 gallons per minute (gpm). Toilets are rated at 1.5 gallons per flush (gpf) and urinals are rated at 1.0 gpf.

Each private patient room also has a restroom and a standing shower rated at 2.0 gallons per minute.

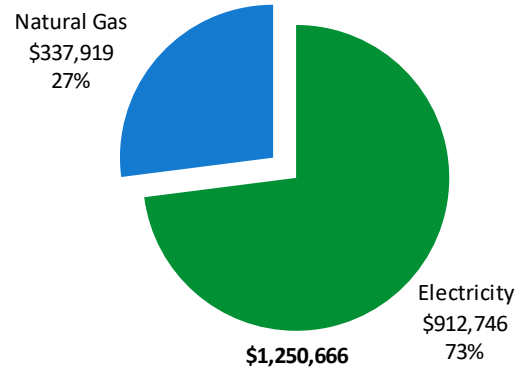
2.14 On-Site Generation

HMH Bayshore Community Hospital has three emergency generators (two 600kW and one 380kW) that, in the event of a power outage, serve the entire building. They are only used for emergency needs.

3 ENERGY USE AND COSTS

Twelve months of utility billing data are used to develop annual energy consumption and cost data. This information creates a profile of the annual energy consumption and energy costs.

Utility Summary		
Fuel	Usage	Cost
Electricity	9,302,867 kWh	\$912,746
Natural Gas	379,734 Therms	\$337,919
Total		\$1,250,666



An energy balance identifies and quantifies energy use in your various building systems. This can highlight areas with the most potential for improvement. This energy balance was developed using calculated energy use for each of the end uses noted in the figure.

The energy auditor collects information regarding equipment operating hours, capacity, efficiency, and other operational parameters from facility staff, drawings, and on-site observations. This information is used as the inputs to calculate the existing conditions energy use for the site. The calculated energy use is then compared to the historical energy use and the initial inputs are revised, as necessary, to balance the calculated energy use to the historical energy use.

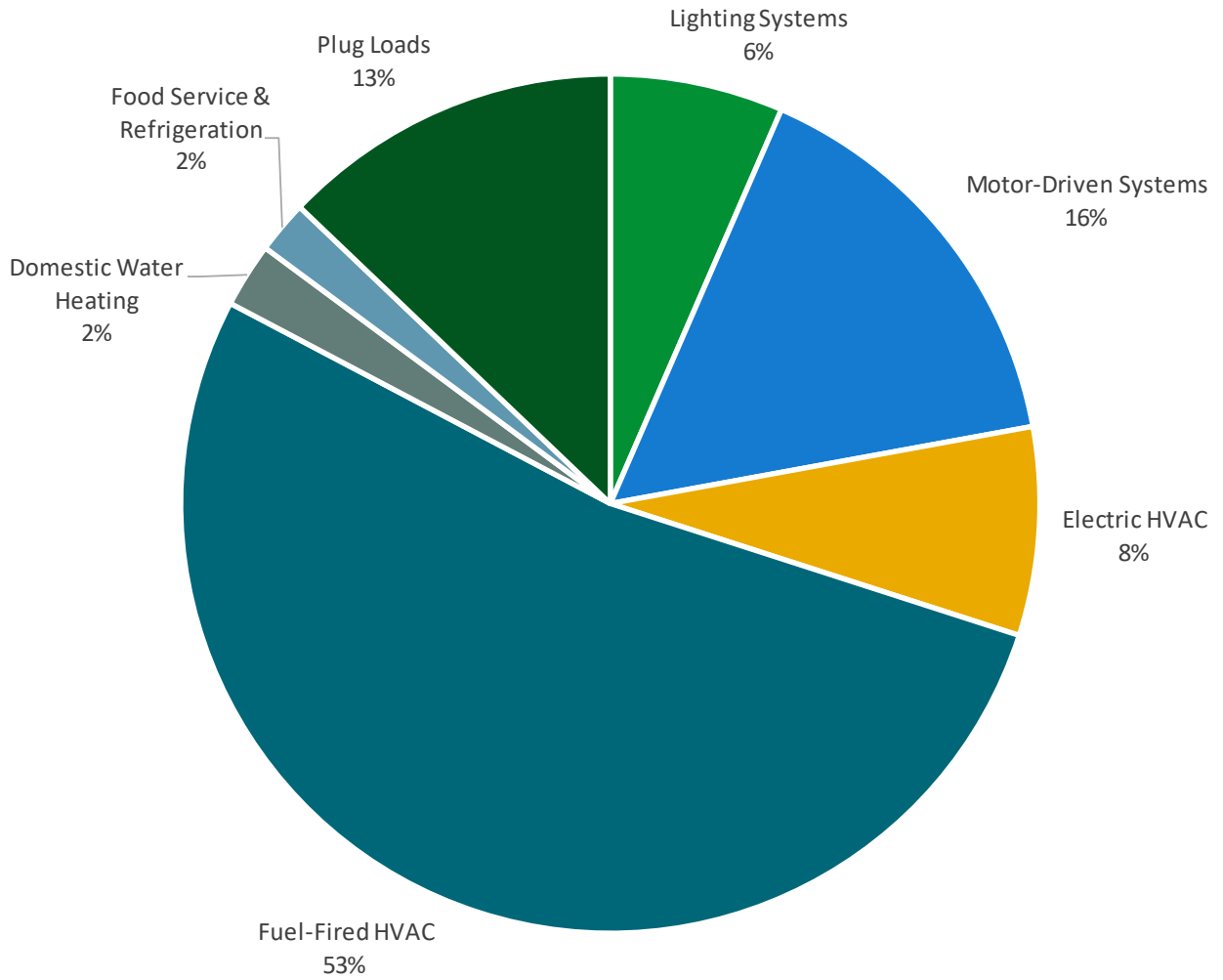
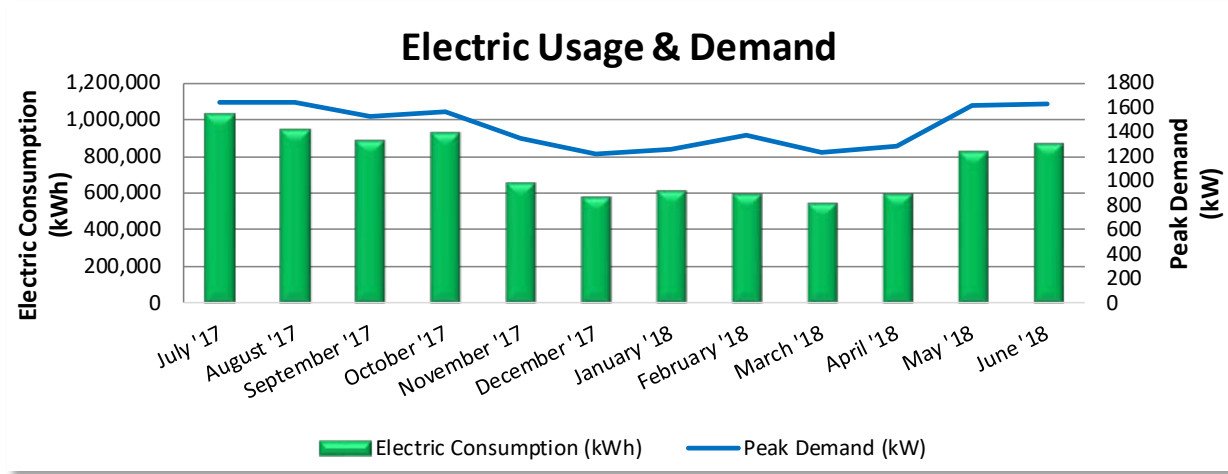


Figure 5 - Energy Balance

3.1 Electricity

JCP&L delivers electricity under rate class General Service Primary, with electric production provided by Direct Energy, a third-party supplier.



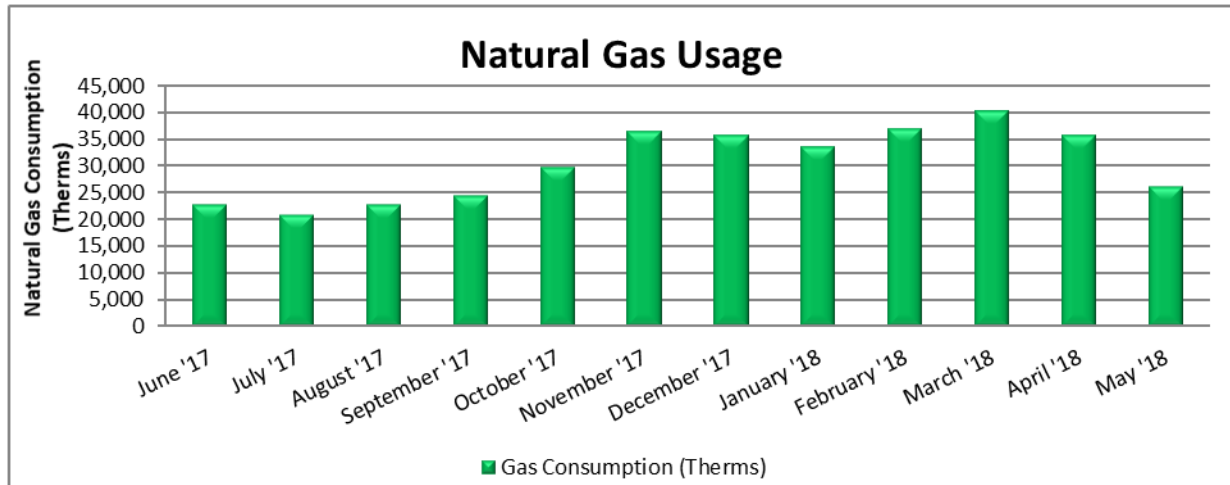
Electric Billing Data					
Period Ending	Days in Period	Electric Usage (kWh)	Demand (kW)	Demand Cost	Total Electric Cost
7/19/17	29	1,030,996	1,646		\$101,200
8/19/17	30	948,882	1,639		\$95,373
9/19/17	30	883,370	1,531		\$88,831
10/19/17	29	928,712	1,568		\$92,099
11/19/17	30	657,315	1,352		\$66,440
12/19/17	29	579,634	1,220		\$58,875
1/20/18	31	611,212	1,255		\$58,595
2/20/18	30	592,342	1,378		\$57,751
3/22/18	29	546,110	1,227		\$52,892
4/20/18	28	597,051	1,283		\$57,203
5/22/18	31	829,641	1,620		\$78,355
6/22/18	30	868,216	1,631		\$82,626
Totals	356	9,073,481	1,646	\$0	\$890,240
Annual	365	9,302,867	1,646	\$0	\$912,746

Notes:

- Peak demand of 1,646 kW occurred in July '17.
- The average electric cost over the past 12 months was \$0.098/kWh, which is the blended rate that includes energy supply, distribution, demand, and other charges. This report uses this blended rate to estimate energy cost savings.
- Higher energy consumption in summer months is indicative of the air conditioning usage as primary load.

3.2 Natural Gas

New Jersey Natural Gas delivers natural gas provided by Direct Energy, a third-party supplier.



Gas Billing Data			
Period Ending	Days in Period	Natural Gas Usage (Therms)	Natural Gas Cost
7/1/17	29	22,832	\$20,984
8/1/17	30	21,063	\$19,368
9/1/17	30	22,938	\$21,065
10/1/17	29	24,682	\$22,656
11/1/17	30	29,953	\$27,464
12/1/17	29	36,547	\$33,474
1/1/18	30	35,784	\$32,787
2/1/18	30	33,717	\$30,880
3/1/18	27	36,996	\$33,885
4/1/18	30	40,548	\$37,082
5/1/18	29	35,874	\$32,716
6/1/18	30	26,318	\$14,448
Totals	353	367,250	\$326,810
Annual	365	379,734	\$337,919

Notes:

- The average gas cost for the past 12 months is \$0.890/therm, which is the blended rate used throughout the analysis.
- Boilers operate all year to provide steam for process and domestic hot water loads when there is no space heating demand.

3.3 Benchmarking

Your building was benchmarked using the United States Environmental Protection Agency's (EPA) *Portfolio Manager*® software. Benchmarking compares your building's energy use to that of similar buildings across the county, while neutralizing variations due to location, occupancy and operating hours. Some building types can be scored with a 1-100 ranking of a building's energy performance relative to the national building market. A score of 50 represents the national average and a score of 100 is best.

This ENERGY STAR® benchmarking score provides a comprehensive snapshot of your building's energy performance. It assesses the building's physical assets, operations, and occupant behavior, which is compiled into a quick and easy-to-understand score.

Benchmarking Score	65
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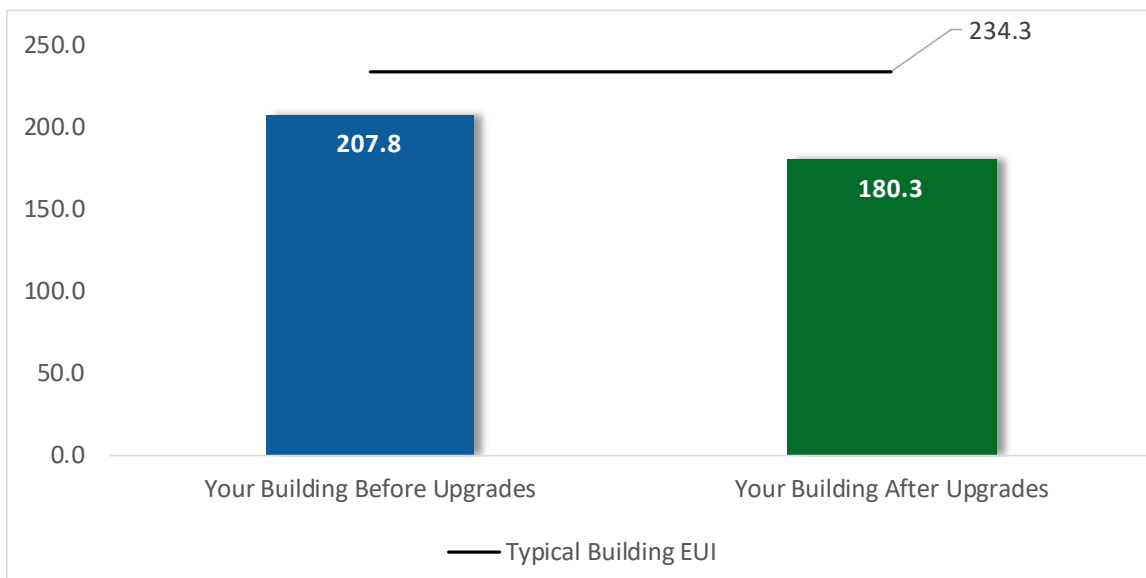


Figure 6 - Energy Use Intensity Comparison

The building performs better than the median point of similar buildings nationally however there are still opportunities for improvement. This report contains suggestions about how to improve building performance and reduce energy costs.

Energy use intensity (EUI) measures energy consumption per square foot and is the standard metric for comparing buildings' energy performance. A lower EUI means better performance and less energy consumed. A number of factors can cause a building to vary from the "typical" energy usage. Local weather conditions, building age and insulation levels, equipment efficiency, daily occupancy hours, changes in occupancy throughout the year, equipment operating hours, and occupant behavior all contribute to a building's energy use and the benchmarking score.

Tracking Your Energy Performance

Keeping track of your energy use monthly is one of the best ways to keep energy costs in check. Update your utility information in Portfolio Manager® regularly, so that you can keep track of your building's performance.

We have created a Portfolio Manager® account for your facility and we have already entered the monthly utility data shown above for you. Account login information for your account will be sent via email.

Free online training is available to help you use ENERGY STAR® Portfolio Manager® to track your building's performance at: <https://www.energystar.gov/buildings/training>.

For more information on ENERGY STAR® and Portfolio Manager®, visit their website³.

³ <https://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/earn-recognition/energy-star-certification/how-app-1>

4 ENERGY CONSERVATION MEASURES

The goal of this audit report is to identify and evaluate potential energy efficiency improvements, provide information about the cost effectiveness of those improvements, and recognize potential financial incentives from NJBPU. Most energy conservation measures have received preliminary analysis of feasibility which identifies expected ranges of savings and costs. This level of analysis is typically enough to demonstrate project cost-effectiveness and help prioritize energy measures.

Calculations of energy use and savings are based on the current version of the *New Jersey's Clean Energy Program Protocols to Measure Resource Savings*, which is approved by the New Jersey Board of Public Utilities. Further analysis or investigation may be required to calculate more precise savings based on specific circumstances.

Operation and maintenance costs for the proposed new equipment will generally be lower than the current costs for the existing equipment—especially if the existing equipment is at or past its normal useful life. We have conservatively assumed there to be no impact on overall maintenance costs over the life of the equipment.

Financial incentives are based on the current NJCEP prescriptive SmartStart program. A higher level of investigation may be necessary to support any SmartStart Custom, Pay for Performance, or Direct Install incentive applications. Some measures and proposed upgrades may be eligible for higher incentives than those shown below through other NJCEP programs described in a following Section of this report.

For a detailed list of the locations and recommended energy conservation measures for all inventoried equipment, see **Appendix A: Equipment Inventory & Recommendations**.

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		463,473	60.3	-76	\$44,801	\$195,583	\$24,591	\$170,992	3.8	457,863
ECM 1	Install LED Fixtures	126,539	21.8	-4	\$12,378	\$144,562	\$16,500	\$128,062	10.3	126,936
ECM 2	Retrofit Fixtures with LED Lamps	336,934	38.5	-71	\$32,423	\$51,021	\$8,091	\$42,930	1.3	330,927
Lighting Control Measures		58,153	6.7	-12	\$5,595	\$30,528	\$3,565	\$26,963	4.8	57,110
ECM 3	Install Occupancy Sensor Lighting Controls	48,495	5.6	-10	\$4,666	\$28,128	\$3,565	\$24,563	5.3	47,625
ECM 4	Install Daylight Dimming Controls	9,658	1.1	-2	\$929	\$2,400	\$0	\$2,400	2.6	9,484
Motor Upgrades		114,182	15.1	0	\$11,203	\$196,155	\$0	\$196,155	17.5	114,981
	Premium Efficiency Motors	114,182	15.1	0	\$11,203	\$196,155	\$0	\$196,155	17.5	114,981
Variable Frequency Drive (VFD) Measures		590,912	96.7	0	\$57,977	\$201,335	\$26,565	\$174,770	3.0	595,044
ECM 5	Install VFDs on Constant Volume (CV) Fans	251,239	36.0	0	\$24,650	\$67,528	\$12,240	\$55,288	2.2	252,995
ECM 6	Install VFDs on Chilled Water Pumps	223,739	47.4	0	\$21,952	\$91,406	\$10,500	\$80,906	3.7	225,303
ECM 7	Install VFDs on Heating Water Pumps	81,756	6.6	0	\$8,021	\$31,580	\$0	\$31,580	3.9	82,328
ECM 8	Install Boiler Draft Fan VFDs	20,768	4.5	0	\$2,038	\$7,214	\$2,325	\$4,889	2.4	20,913
ECM 9	Install VFDs on Kitchen Hood Fan Motors	13,410	2.2	0	\$1,316	\$3,607	\$1,500	\$2,107	1.6	13,504
Electric Chiller Replacement		650,654	306.1	0	\$63,839	\$573,686	\$41,100	\$532,586	8.3	655,204
ECM 10	Install High Efficiency Chillers	650,654	306.1	0	\$63,839	\$573,686	\$41,100	\$532,586	8.3	655,204
Gas Heating (HVAC/Process) Replacement		0	0.0	2,225	\$19,801	\$295,584	\$0	\$295,584	14.9	260,536
ECM 11	Install High Efficiency Steam Boilers	0	0.0	2,225	\$19,801	\$295,584	\$0	\$295,584	14.9	260,536
HVAC System Improvements		58,074	0.0	790	\$12,730	\$39,423	\$0	\$39,423	3.1	151,001
ECM 12	Implement Demand Control Ventilation (DCV)	58,074	0.0	790	\$12,730	\$39,423	\$0	\$39,423	3.1	151,001
Food Service & Refrigeration Measures		22,261	2.6	0	\$2,184	\$3,660	\$400	\$3,260	1.5	22,416
ECM 13	Refrigerator/Freezer Case Electrically Commutated Motors	9,366	1.2	0	\$919	\$1,820	\$0	\$1,820	2.0	9,432
ECM 14	Vending Machine Control	12,895	1.5	0	\$1,265	\$1,840	\$400	\$1,440	1.1	12,985
TOTALS		1,957,710	487.5	2,927	\$218,130	\$1,535,954	\$96,221	\$1,439,733	6.6	2,314,154

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

Figure 7 – All Evaluated ECMs

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		463,473	60.3	-76	\$44,801	\$195,583	\$24,591	\$170,992	3.8	457,863
ECM 1	Install LED Fixtures	126,539	21.8	-4	\$12,378	\$144,562	\$16,500	\$128,062	10.3	126,936
ECM 2	Retrofit Fixtures with LED Lamps	336,934	38.5	-71	\$32,423	\$51,021	\$8,091	\$42,930	1.3	330,927
Lighting Control Measures		58,153	6.7	-12	\$5,595	\$30,528	\$3,565	\$26,963	4.8	57,110
ECM 3	Install Occupancy Sensor Lighting Controls	48,495	5.6	-10	\$4,666	\$28,128	\$3,565	\$24,563	5.3	47,625
ECM 4	Install Daylight Dimming Controls	9,658	1.1	-2	\$929	\$2,400	\$0	\$2,400	2.6	9,484
Variable Frequency Drive (VFD) Measures		590,912	96.7	0	\$57,977	\$201,335	\$26,565	\$174,770	3.0	595,044
ECM 5	Install VFDs on Constant Volume (CV) Fans	251,239	36.0	0	\$24,650	\$67,528	\$12,240	\$55,288	2.2	252,995
ECM 6	Install VFDs on Chilled Water Pumps	223,739	47.4	0	\$21,952	\$91,406	\$10,500	\$80,906	3.7	225,303
ECM 7	Install VFDs on Heating Water Pumps	81,756	6.6	0	\$8,021	\$31,580	\$0	\$31,580	3.9	82,328
ECM 8	Install Boiler Draft Fan VFDs	20,768	4.5	0	\$2,038	\$7,214	\$2,325	\$4,889	2.4	20,913
ECM 9	Install VFDs on Kitchen Hood Fan Motors	13,410	2.2	0	\$1,316	\$3,607	\$1,500	\$2,107	1.6	13,504
Electric Chiller Replacement		650,654	306.1	0	\$63,839	\$573,686	\$41,100	\$532,586	8.3	655,204
ECM 10	Install High Efficiency Chillers	650,654	306.1	0	\$63,839	\$573,686	\$41,100	\$532,586	8.3	655,204
Gas Heating (HVAC/Process) Replacement		0	0.0	2,225	\$19,801	\$295,584	\$0	\$295,584	14.9	260,536
ECM 11	Install High Efficiency Steam Boilers	0	0.0	2,225	\$19,801	\$295,584	\$0	\$295,584	14.9	260,536
HVAC System Improvements		58,074	0.0	790	\$12,730	\$39,423	\$0	\$39,423	3.1	151,001
ECM 12	Implement Demand Control Ventilation (DCV)	58,074	0.0	790	\$12,730	\$39,423	\$0	\$39,423	3.1	151,001
Food Service & Refrigeration Measures		22,261	2.6	0	\$2,184	\$3,660	\$400	\$3,260	1.5	22,416
ECM 13	Refrigerator/Freezer Case Electrically Commutated Motors	9,366	1.2	0	\$919	\$1,820	\$0	\$1,820	2.0	9,432
ECM 14	Vending Machine Control	12,895	1.5	0	\$1,265	\$1,840	\$400	\$1,440	1.1	12,985
TOTALS		1,843,527	472.4	2,927	\$206,927	\$1,339,799	\$96,221	\$1,243,578	6.0	2,199,173

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

Figure 8 – Cost Effective ECMs

4.1 Lighting

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		463,473	60.3	-76	\$44,801	\$195,583	\$24,591	\$170,992	3.8	457,863
ECM 1	Install LED Fixtures	126,539	21.8	-4	\$12,378	\$144,562	\$16,500	\$128,062	10.3	126,936
ECM 2	Retrofit Fixtures with LED Lamps	336,934	38.5	-71	\$32,423	\$51,021	\$8,091	\$42,930	1.3	330,927

When considering lighting upgrades, we suggest using a comprehensive design approach that simultaneously upgrades lighting fixtures and controls to maximize energy savings and improve occupant lighting. Comprehensive design will also consider appropriate lighting levels for different space types to make sure that the right amount of light is delivered where needed. If conversion to LED light sources are proposed, we suggest converting all of a specific lighting type (e.g. linear fluorescent) to LED lamps to minimize the number of lamp types in use at the facility, which should help reduce future maintenance costs.

ECM 1: Install LED Fixtures

Replace existing fixtures containing metal halide lamps with new LED light fixtures. This measure saves energy by installing LEDs which use less power than other technologies with a comparable light output.

In some cases, metal halide fixtures can be retrofit with screw-based LED lamps. Replacing an existing metal halide fixture with a new LED fixture will generally provide better overall lighting optics; however, replacing the metal halide lamp with a LED screw-in lamp is typically a less expensive retrofit. We recommend you work with your lighting contractor to determine which retrofit solution is best suited to your needs and will be compatible with the existing fixtures.

Maintenance savings may also be achieved since LED lamps last longer than other light sources and therefore do not need to be replaced as often.

Affected building areas: outpatient lobby, loading dock, exterior wall packs, parking lots.

ECM 2: Retrofit Fixtures with LED Lamps

Replace fluorescent and compact fluorescent lamps with LED lamps. Many LED tubes are direct replacements for existing fluorescent tubes and can be installed while leaving the fluorescent fixture ballast in place. LED lamps can be used in existing fixtures as a direct replacement for most other lighting technologies.

This measure saves energy by installing LEDs which use less power than other lighting technologies yet provide equivalent lighting output for the space. Maintenance savings may also be available, as longer-lasting LEDs lamps will not need to be replaced as often as the existing lamps.

Affected building areas: all areas with fluorescent fixtures with T8 tubes and third floor private room with CFLs.

4.2 Lighting Controls

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Control Measures		58,153	6.7	-12	\$5,595	\$30,528	\$3,565	\$26,963	4.8	57,110
ECM 3	Install Occupancy Sensor Lighting Controls	48,495	5.6	-10	\$4,666	\$28,128	\$3,565	\$24,563	5.3	47,625
ECM 4	Install Daylight Dimming Controls	9,658	1.1	-2	\$929	\$2,400	\$0	\$2,400	2.6	9,484

Lighting controls reduce energy use by turning off or lowering, lighting fixture power levels when not in use. A comprehensive approach to lighting design should upgrade the lighting fixtures and the controls together for maximum energy savings and improved lighting for occupants.

ECM 3: Install Occupancy Sensor Lighting Controls

Install occupancy sensors to control lighting fixtures in areas that are frequently unoccupied, even for short periods. Due to the hospital facility most areas always need to remain illuminated hence this measure is only recommended for certain private offices, storage, and restrooms which are unoccupied most of the time. For most spaces, we recommend lighting controls use dual technology sensors, which reduce the possibility of lights turning off unexpectedly.

Occupancy sensors detect occupancy using ultrasonic and/or infrared sensors. When an occupant enters the space, the lighting fixtures switch to full lighting levels. Most occupancy sensor lighting controls allow users to manually turn fixtures on/off, as needed. Some controls can also provide dimming options.

Occupancy sensors can be mounted on the wall at existing switch locations, mounted on the ceiling, or in remote locations. In general, wall switch replacement sensors are best suited to single occupant offices and other small rooms. Ceiling-mounted or remote mounted sensors are used in large spaces, locations without local switching, and where wall switches are not in the line-of-sight of the main work area.

This measure provides energy savings by reducing the lighting operating hours.

Affected building areas: private offices, break room, restrooms, storage rooms, and the HR department.

ECM 4: Install Daylight Dimming Controls

Install daylight dimming controls that use photosensors to reduce electric lighting in cafeteria when ample daylight lighting is present. Use photosensor controls for fixtures serving areas that are lit by sunlight. As sunlight levels increase in the room, artificial lighting decreases or turns off.

This measure reduces energy use in spaces where ambient daylight provides sufficient lighting levels. Optimum light levels and the method of dimming should be determined during lighting design.

Affected building areas: cafeteria.

4.3 Motors

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Motor Upgrades		114,182	15.1	0	\$11,203	\$196,155	\$0	\$196,155	17.5	114,981
	Premium Efficiency Motors	114,182	15.1	0	\$11,203	\$196,155	\$0	\$196,155	17.5	114,981

Replacing the motors with premium efficient motors has a long payback period and may not be justifiable based simply on energy considerations. When the motors are eventually replaced, consider purchasing premium efficient motors.

Premium Efficiency Motors

Replace standard efficiency motors with IHP 2014 efficiency motors. This evaluation assumes that existing motors will be replaced with motors of equivalent size and type. In some cases, additional savings may be possible by downsizing motors to better meet the motor's current load requirements.

Affected motors:

Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor
Boiler room	Chiller	2	Chilled Water Pump	30.0
Boiler room	Boiler	2	Heating Hot Water Pump	25.0
Boiler room	Boiler room	2	Condenser Water Pump	25.0
Boiler room	Boiler	2	Combustion Air Fan	7.5
AHU-1	Rooms 230, 330, Hallways and rooms	1	Supply Fan	15.0
AHU-2	ICU	1	Supply Fan	20.0
AHU-3	4E, common areas, MDS, rooms 1-3	1	Supply Fan	15.0
AHU-4	MDS	1	Supply Fan	15.0
AHU-5	3E and 3W common areas	1	Supply Fan	7.5
AHU-6	Cardiac Cath	1	Supply Fan	7.5
AHU-7	Special procedures	1	Supply Fan	5.0
AHU-8	2nd Floor 2 East & 2 West common area	1	Supply Fan	7.5
AHU-10	New ER, T1, T2, Recep, Lobby, Boold Lab, Cashier, Empl Health	1	Supply Fan	25.0
AHU-11	Operating Room	1	Supply Fan	15.0
AHU-15	Operator Room	1	Supply Fan	0.5

Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor
AHU-17	HVAC, Central Sterile, Hallway	1	Supply Fan	15.0
AHU-18	X-Ray, Waiting, Pediatrics	1	Supply Fan	20.0
AHU-21	Medical Staff and Medical Records	1	Supply Fan	5.0
AHU-22	Medical Supply	1	Supply Fan	5.0
AHU-23	Pharmacy	1	Supply Fan	3.0
AHU-24	Enviornmental Services, Linen Room and Mail Room	1	Supply Fan	1.0
AHU-27	Kitchen	1	Supply Fan	20.0
AHU-28	Serving Line	1	Supply Fan	3.0
AHU-29	Lab, Lab Offices	1	Supply Fan	25.0
AHU-30	PT Treatment	1	Supply Fan	15.0
AHU-31	Cafeteria, Dining Area	1	Supply Fan	10.0
AHU-32	Conference rooms A & B, Admin Common Area	1	Supply Fan	10.0
AHU-33	Admin Offices (Ground Floor), Board Room, Lab Offices	1	Supply Fan	10.0
AHU-34	New ENDO Unit	1	Supply Fan	1.5
AHU-35 / HV-1	PT Main Area	1	Supply Fan	7.5
AHU-37	Radiology	1	Supply Fan	20.0
AHU-38	Basement, Plant Operations Offices, Cardiac Services	1	Supply Fan	20.0
AHU-39	Cardiac Cath	1	Supply Fan	20.0
AHU-1	Rooms 230, 330, Hallways and rooms	1	Return Fan	7.5

Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor
AHU-10	New ER, T1, T2, Recep, Lobby, Boold Lab, Cashier, Empl Health	1	Return Fan	10.0
AHU-11	Operating Room	1	Return Fan	3.0
AHU-29	Lab, Lab Offices	1	Return Fan	1.5
AHU-30	PT Treatment	1	Return Fan	1.5
AHU-37	Radiology	1	Return Fan	5.0
AHU-38	Basement, Plant Operations Offices, Cardiac Services	1	Return Fan	7.5
AHU-39	Cardiac Cath	1	Return Fan	7.5
Dock Chemical Room	Dock Chemical Room	1	Exhaust Fan	0.3
IV Room	IV Room	1	Exhaust Fan	0.3
Boiler Room	Boiler Room	1	Exhaust Fan	2.0
Boiler Room	Boiler Room	1	Exhaust Fan	2.0
Boiler Room	Boiler Room	1	Exhaust Fan	0.8
Morgue	Morgue	1	Exhaust Fan	0.8
Morgue Restroom	Morgue Restroom	1	Exhaust Fan	0.3

Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor
O.R.	O.R.	1	Exhaust Fan	0.3
O. R. Storage	O. R. Storage	1	Exhaust Fan	0.3
O.R.	O.R.	1	Exhaust Fan	0.3
O.R.	O.R.	1	Exhaust Fan	0.3
Central Sterile	Central Sterile	1	Exhaust Fan	0.5
Central Sterile	Central Sterile	1	Exhaust Fan	1.0
Central Sterile	Central Sterile	1	Exhaust Fan	0.3
Central Sterile	Central Sterile	1	Exhaust Fan	0.3
Central Sterile	Central Sterile	1	Exhaust Fan	0.5
Central Sterile	Central Sterile	1	Exhaust Fan	0.3
Endo Room C	Endo Room C	1	Exhaust Fan	0.3
E. D.	E. D.	1	Exhaust Fan	0.8
E. D.	E. D.	1	Exhaust Fan	0.3
P.T.	P.T.	1	Exhaust Fan	0.3
P. T.	P. T.	1	Exhaust Fan	0.3
CT Inpatient	CT Inpatient	1	Exhaust Fan	0.8
Imaging Pavillion	Imaging Pavillion	1	Exhaust Fan	0.8
Imaging Pavillion	Imaging Pavillion	1	Exhaust Fan	0.8

Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor
Imaging Pavillion	Imaging Pavillion	1	Exhaust Fan	0.3
East Restrooms	East Restrooms	1	Exhaust Fan	3.0
Neg. Pressure 332-432	Neg. Pressure 332-432	1	Exhaust Fan	0.8
West Restrooms	West Restrooms	1	Exhaust Fan	2.0
West Restrooms	West Restrooms	1	Exhaust Fan	1.0
Neg. Pressure 412	Neg. Pressure 412	1	Exhaust Fan	0.8
Kitchen	Kitchen	1	Exhaust Fan	7.5
Kitchen	Kitchen	1	Exhaust Fan	0.5
ICU	ICU	1	Exhaust Fan	1.0
ICU	ICU	1	Exhaust Fan	0.8
Lab	Lab	1	Exhaust Fan	0.8
Lab	Lab	1	Exhaust Fan	0.3
Lab	Lab	1	Exhaust Fan	0.3
Lab	Lab	1	Exhaust Fan	0.5

Savings are based on the difference between baseline and proposed efficiencies and the assumed annual operating hours. The base case motor energy consumption is estimated using the efficiencies found on nameplates or estimated based on the age of the motor and our best estimates of motor run hours. Efficiencies of proposed motor upgrades are obtained from the current *New Jersey's Clean Energy Program Protocols to Measure Resource Savings*.

4.4 Variable Frequency Drives (VFD)

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Variable Frequency Drive (VFD) Measures		590,912	96.7	0	\$57,977	\$201,335	\$26,565	\$174,770	3.0	595,044
ECM 5	Install VFDs on Constant Volume (CV) Fans	251,239	36.0	0	\$24,650	\$67,528	\$12,240	\$55,288	2.2	252,995
ECM 6	Install VFDs on Chilled Water Pumps	223,739	47.4	0	\$21,952	\$91,406	\$10,500	\$80,906	3.7	225,303
ECM 7	Install VFDs on Heating Water Pumps	81,756	6.6	0	\$8,021	\$31,580	\$0	\$31,580	3.9	82,328
ECM 8	Install Boiler Draft Fan VFDs	20,768	4.5	0	\$2,038	\$7,214	\$2,325	\$4,889	2.4	20,913
ECM 9	Install VFDs on Kitchen Hood Fan Motors	13,410	2.2	0	\$1,316	\$3,607	\$1,500	\$2,107	1.6	13,504

Variable frequency drives control motors for fans, pumps, and process equipment based on the actual output required of the driven equipment. Energy savings result from more efficient control of motor energy usage when equipment operates at partial load. The magnitude of energy savings depends on the estimated amount of time that the motor would operate at partial load. For equipment with proposed VFDs, we have included replacing the controlled motor with a new motor—unless the existing motor meets or exceeds IHP 2014 standards—to conservatively account for the cost of an inverter duty rated motor. The savings and cost associated with the new motor are presented with the Premium Efficiency Motor measures. If the proposed VFD measure is not selected for implementation the motor replacement should be reevaluated.

ECM 5: Install VFDs on Constant Volume (CV) Fans

Install VFDs to control constant volume fan motor speeds. This converts a constant-volume, single-zone air handling system into a variable-air-volume (VAV) system. A separate VFD is will also need to be installed to control the return fan motor or dedicated exhaust fan motor, if the air handler has one. As this is a hospital facility care must be taken to ensure proper pressurization requirements are met in the zones.

Zone thermostats signal the VFD to adjust fan speed to maintain the appropriate temperature in the zone, while maintaining a constant supply air temperature.

VAV system controls should not raise the supply air temperature at the expense of the fan power. A common mistake is to reset the supply air temperature to achieve chiller energy savings, which can lead to additional air flow requirements. Supply air temperature should be kept low (e.g. 55°F) until the minimum fan speed (typically about 50%) is met. At this point, it is efficient to raise the supply air temperature as the load decreases, but not such that additional air flow and thus fan energy is required.

Energy savings result from reducing the fan speed (and power) when conditions allow for reduced air flow.

Affected air handlers: AHU 11, AHU 29, AHU 30, and cooling tower fans.

ECM 6: Install VFDs on Chilled Water Pumps

Install VFDs to control chilled water pumps. Two-way valves must serve the chilled water coils being served and the chilled water loop must have a differential pressure sensor installed. If three-way valves or a bypass leg are used in the chilled water distribution, they will need to be modified when this measure is implemented. As the chilled water valves close, the differential pressure increases, and the VFD modulates the pump speed to maintain a differential pressure setpoint.

For systems with variable chilled water flow through the chiller, the minimum flow to prevent the chiller from tripping off will need to be determined during the final project design. The control system should be programmed to maintain the minimum flow through the chiller and to prevent pump cavitation.

Energy savings result from reducing the pump motor speed (and power) as chilled water valves close. The magnitude of energy savings is based on the estimated amount of time that the system operates at reduced loads.

ECM 7: Install VFDs on Heating Water Pumps

Install variable frequency drives (VFD) to control heating water pumps. Two-way valves must serve the hot water coils and the hot water loop must have a differential pressure sensor installed. If three-way valves or a bypass leg are used in the hot water distribution they will need to be modified when this measure is implemented. As the hot water valves close, the differential pressure increases and the VFD modulates the pump speed to maintain a differential pressure setpoint.

Energy savings result from reducing pump motor speed (and power) as hot water valves close. The magnitude of energy savings is based on the estimated amount of time that the system will operate at reduced load.

ECM 8: Install Boiler Draft Fan VFDs

Replace existing volume control devices on boiler draft fans, such as inlet vanes or dampers, with VFDs. Inlet vanes or dampers are an inefficient means of controlling the air volume compared to VFDs. The existing volume control device will be removed or permanently disabled, and the control signal will be redirected to the VFD to determine proper fan motor speed.

Energy savings result from reducing the draft fan speed (and power) when conditions allow for reduced combustion air flow.

Additional maintenance savings may result from this measure. VFDs are solid state electronic devices, which generally requires less maintenance than mechanical air volume control devices.

ECM 9: Install VFDs on Kitchen Hood Fan Motors

Install VFDs and sensors to control the kitchen hood fan motors. The air flow of the hood is varied based on two key inputs: temperature and smoke/cooking fumes. The VFD controls the amount of exhaust (and kitchen make-up air) based on temperature—the lower the temperature the lower the flow. If the optic sensor is triggered by smoke or cooking fumes, the speed of the fan ramps up to 100%.

Energy savings result from reducing the hood fan speed and power when conditions allow for reduced air flow. During the site audit it was noted the even though the kitchen is open from 6:00 AM to 2:00 AM there are periods when the hood fan can be slowed down or turned off realizing energy savings.

4.5 Electric Chillers

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
	Electric Chiller Replacement	650,654	306.1	0	\$63,839	\$573,686	\$41,100	\$532,586	8.3	655,204
ECM 10	Install High Efficiency Chillers	650,654	306.1	0	\$63,839	\$573,686	\$41,100	\$532,586	8.3	655,204

ECM 10: Install High Efficiency Chillers

Replace older inefficient electric chillers (CH2, CH3, CH4, and CH5) with new high efficiency chillers. The type of chiller to be installed depends on the magnitude of the cooling load and variability of the cooling load profile, for example:

- Positive displacement chillers are usually under 600 tons of cooling capacity and centrifugal chillers generally start at 150 tons of cooling capacity.
- Constant speed chillers should be used to meet cooling loads with little or no variation while variable speed chillers are more efficient for variable cooling load profiles.
- Water cooled chillers are more efficient than air cooled chillers but require cooling towers and additional pumps to circulate the cooling water.
- In any given size range, variable speed chillers tend to have better partial load efficiency, but worse full load efficiency, than constant speed chillers.

Energy savings result from the improvement in chiller efficiency and matching the right type of chiller to the cooling load. The energy savings are calculated based on the cooling capacity of the new chiller, the improvement in efficiency compared with the base case equipment, the cooling load profile, and the estimated annual operating hours of the chiller before and after the upgrade.

For the purposes of this analysis, we evaluated the replacement of chillers on a one-for-one basis with equipment of the same capacity. We recommend that you work with your design team to select chillers that are sized appropriately for the cooling load at this facility. In some cases, the plant energy use can be reduced by selecting multiple chillers that match the facility load profile rather than one or two large chillers. This can also improve the chiller plant reliability through increased redundancy. Energy savings are maximized by proper selection of new equipment based on the cooling load profile.

4.6 Gas-Fired Heating

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$) *	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Gas Heating (HVAC/Process) Replacement		0	0.0	2,225	\$19,801	\$295,584	\$0	\$295,584	14.9	260,536
ECM 11	Install High Efficiency Steam Boilers	0	0.0	2,225	\$19,801	\$295,584	\$0	\$295,584	14.9	260,536

ECM 11: Install High Efficiency Steam Boilers

Replace two older inefficient 8,625 MBh steam boilers with high efficiency steam boilers. Energy savings results from improved combustion efficiency and reduced standby losses at low loads.

For the purposes of this analysis, we evaluated the replacement of boilers on a one-for-one basis with equipment of the same capacity. However, based on the utility bill analysis and site interview the facility only needs one of the two boilers to meet demand during a typical year. Currently in the summer and shoulder months when there is low demand for hot water the facility still must keep at least one the large boiler running causing it to operate at a load significantly lower than its peak capacity thus wasting energy. A more efficient arrangement would be installing smaller modular boilers which can modulate capacity based on demand only firing the number of boilers needed saving significantly on gas usage. In addition, modular boiler arrangement would also provide redundancy in operation.

We recommend that you work with your mechanical design team to select boilers that are sized appropriately for the heating load.

4.7 HVAC

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
HVAC System Improvements		58,074	0.0	790	\$12,730	\$39,423	\$0	\$39,423	3.1	151,001
ECM 12	Implement Demand Control Ventilation (DCV)	58,074	0.0	790	\$12,730	\$39,423	\$0	\$39,423	3.1	151,001

ECM 12: Implement Demand Control Ventilation (DCV)

Demand control ventilation (DCV) monitors the indoor air's carbon dioxide (CO₂) content to measure room occupancy. This data is used to regulate the amount of outdoor air provided to the space for ventilation.

Standard ventilation systems often provide outside air based on a space's estimated maximum occupancy but not actual occupancy. During low occupancy periods, the space may then be over ventilated. This wastes energy through excessive fan motor usage as well as heating and cooling the excess outside air flow. DCV reduces unnecessary outdoor air intake by regulating ventilation based on actual occupancy levels. DCV is most suited for facilities where occupancy levels vary significantly from hour to hour and day to day.

Energy savings associated with DCV are based on hours of operation, space occupancy, system air flow, outside air reduction, and other factors. Energy savings results from eliminating unnecessary ventilation and space conditioning.

The audit identified AHUs that can be retrofitted for the DCV measure based on usage pattern and occupancy. Care must be taken to ensure proper pressurization requirements are met in the zones where DCV is implemented.

Affected building areas: AHU 11 (OR), AHU 30 (physical therapy), and AHU 31 (cafeteria).

4.8 Food Service & Refrigeration Measures

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Food Service & Refrigeration Measures		22,261	2.6	0	\$2,184	\$3,660	\$400	\$3,260	1.5	22,416
ECM 13	Refrigerator/Freezer Case Electrically Commutated Motors	9,366	1.2	0	\$919	\$1,820	\$0	\$1,820	2.0	9,432
ECM 14	Vending Machine Control	12,895	1.5	0	\$1,265	\$1,840	\$400	\$1,440	1.1	12,985

ECM 13: Refrigerator/Freezer Case Electrically Commutated Motors

Replace shaded pole or permanent split capacitor (PSC) motors with electronically commutated (EC) motors in the walk-in refrigerators. Fractional horsepower EC motors are significantly more efficient than mechanically commutated, brushed motors, particularly at low speeds or partial load. By using variable-speed technology, EC motors can optimize fan usage. Because these motors are brushless and use DC power, losses due to friction and phase shifting are eliminated.

Savings for this measure consider both the increased efficiency of the motor as well as the reduction in refrigeration load due to motor heat loss.

ECM 14: Vending Machine Control

Vending machines operate continuously, even during unoccupied hours. Install occupancy sensor controls to reduce energy use. These controls power down vending machines when the vending machine area has been vacant for some time, and power up the machines at necessary regular intervals or when the surrounding area is occupied. Energy savings are dependent on the vending machine and activity level in the area surrounding the machines.

5 ENERGY EFFICIENT BEST PRACTICES

A whole building maintenance plan will extend equipment life; improve occupant comfort, health, and safety; and reduce energy and maintenance costs. You may already be doing some of these things— see our list below for potential additions to your maintenance plan. Be sure to consult with qualified equipment specialists for details on proper maintenance and system operation.

Energy Tracking with ENERGY STAR® Portfolio Manager®



You've heard it before - you can't manage what you don't measure. ENERGY STAR® Portfolio Manager® is an online tool that you can use to measure and track energy and water consumption, as well as greenhouse gas emissions⁴. Your account has already been established. Now you can continue to keep tabs on your energy performance every month.

Lighting Maintenance



- Clean lamps, reflectors and lenses of dirt, dust, oil, and smoke buildup every six to twelve months. Light levels decrease over time due to lamp aging, lamp and ballast failure, and buildup of dirt and dust. Together, this can reduce total light output by up to 60% while still drawing full power.

• In addition to routine cleaning, developing a maintenance schedule can ensure that maintenance is performed regularly, and it can reduce the overall cost of fixture re-lamping and re-ballasting. Group re-lamping and re-ballasting maintains lighting levels and minimizes the number of site visits by a lighting technician or contractor, decreasing the overall cost of maintenance.

Motor Controls

Electric motors often run unnecessarily, and this is an overlooked opportunity to save energy. These motors should be identified and turned off when appropriate. For example, exhaust fans often run unnecessarily when ventilation requirements are already met. Whenever possible, use automatic devices such as twist timers or occupancy sensors to turn off motors when they are not needed.

Motor Maintenance

Motors have many moving parts. As these parts degrade over time, the efficiency of the motor is reduced. Routine maintenance prevents damage to motor components. Routine maintenance should include cleaning surfaces and ventilation openings on motors to prevent overheating, lubricating moving parts to reduce friction, inspecting belts and pulleys for wear and to ensure they are at proper alignment and tension, and cleaning and lubricating bearings. Consult a licensed technician to assess these and other motor maintenance strategies.

⁴ <https://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager>

Thermostat Schedules and Temperature Resets



Use thermostat setback temperatures and schedules to reduce heating and cooling energy use during periods of low or no occupancy. Thermostats should be programmed for a setback of 5-10°F during low occupancy hours (reduce heating setpoints and increase cooling setpoints). Cooling load can be reduced by increasing the facility's occupied setpoint temperature. In general, during the cooling season, thermostats should be set as high as possible without sacrificing occupant comfort.

Economizer Maintenance

Economizers can significantly reduce cooling system load. A malfunctioning economizer can increase the amount of heating and mechanical cooling required by introducing excess amounts of cold or hot outside air. Common economizer malfunctions include broken outdoor thermostat or enthalpy control, or dampers that are stuck or improperly adjusted.

Periodic inspection and maintenance will keep economizers working in sync with the heating and cooling system. This maintenance should be part of annual system maintenance, and it should include proper setting of the outdoor thermostat/enthalpy control, inspection of control and damper operation, lubrication of damper connections, and adjustment of minimum damper position.

Chiller Maintenance

Service chillers regularly to keep them operating properly. Chillers are responsible for a substantial portion of a commercial building's overall energy usage and when they do not work well, there is usually a noticeable increase in energy bills and increased occupant complaints. Regular diagnostics and service can save five to ten percent of the cost of operating your chiller. If you already have a maintenance contract in place, your existing service company should be able to provide these services.

AC System Evaporator/Condenser Coil Cleaning

Dirty evaporator and condenser coils restrict air flow and restrict heat transfer. This increases the loads on the evaporator and condenser fan and decreases overall cooling system performance. Keeping the coils clean allows the fans and cooling system to operate more efficiently.

HVAC Filter Cleaning and Replacement

Air filters should be checked regularly (often monthly) and cleaned or replaced when appropriate. Air filters reduce indoor air pollution, increase occupant comfort, and help keep equipment operating efficiently. If the building has a building management system, consider installing a differential pressure switch across filters to send an alarm about premature fouling or overdue filter replacement. Over time, filters become less and less effective as particulate buildup increases. Dirty filters also restrict air flow through the air conditioning or heat pump system, which increases the load on the distribution fans.

Duct Sealing

Duct leakage in commercial buildings can account for five to twenty-five percent of the supply airflow. In the case of rooftop air handlers, duct leakage can occur to the outside of the building wasting conditioned air. Eliminating duct leaks can improve ventilation system performance and reduce heating and cooling system operation.

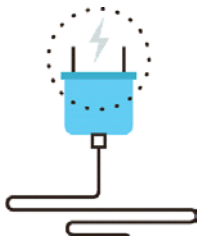
Compressed Air System Maintenance

Compressed air systems require periodic maintenance to operate at peak efficiency. A maintenance plan for compressed air systems should include:

- Inspection, cleaning, and replacement of inlet filter cartridges
- Cleaning of drain traps
- Daily inspection of lubricant levels to reduce unwanted friction
- Inspection of belt condition and tension
- Check for leaks and adjust loose connections
- Overall system cleaning

Contact a qualified technician for help with setting up periodic maintenance schedule.

Plug Load Controls



Reducing plug loads is a common way to decrease your electrical use. Limiting the energy use of plug loads can include increasing occupant awareness, removing under-used equipment, installing hardware controls, and using software controls. Consider enabling the most aggressive power settings on existing devices or install load sensing or occupancy sensing (advanced) power strips⁵. Your local utility may offer incentives or rebates for this equipment.

⁵ For additional information refer to “Assessing and Reducing Plug and Process Loads in Office Buildings” <http://www.nrel.gov/docs/fy13osti/54175.pdf>, or “Plug Load Best Practices Guide” <http://www.advancedbuildings.net/plug-load-best-practices-guide-offices>

Water Conservation



Installing dual flush or low-flow toilets and low-flow/waterless urinals are ways to reduce water use. The EPA WaterSense™ ratings for urinals is 0.5 gpf and for flush valve toilets is 1.28 gpf (this is lower than the current 1.6 gpf federal standard).

For more information regarding water conservation go to the EPA's WaterSense™ website⁶ or download a copy of EPA's "WaterSense™ at Work: Best Management Practices for Commercial and Institutional Facilities"⁷ to get ideas for creating a water management plan and best practices for a wide range of water using systems.

Water conservation devices that do not reduce hot water consumption will not provide energy savings at the site level, but they may significantly affect your water and sewer usage costs. Any reduction in water use does however ultimately reduce grid-level electricity use since a significant amount of electricity is used to deliver water from reservoirs to end users.

If the facility has detached buildings with a master water meter for the entire campus, check for unnatural wet areas in the lawn or water seeping in the foundation at water pipe penetrations through the foundation. Periodically check overnight meter readings when the facility is unoccupied, and there is no other scheduled water usage.

Manage irrigation systems to use water more effectively outside the building. Adjust spray patterns so that water lands on intended lawns and plantings and not on pavement and walls. Consider installing an evapotranspiration irrigation controller that will prevent over-watering.

Procurement Strategies

Purchasing efficient products reduces energy costs without compromising quality. Consider modifying your procurement policies and language to require ENERGY STAR® or WaterSense™ products where available.

⁶ <https://www.epa.gov/watersense>

⁷ <https://www.epa.gov/watersense/watersense-work-0>

6 ON-SITE GENERATION

You don't have to look far in New Jersey to see one of the thousands of solar electric systems providing clean power to homes, businesses, schools, and government buildings. On-site generation includes both renewable (e.g., solar, wind) and non-renewable (e.g., fuel cells) technologies that generate power to meet all or a portion of the facility's electric energy needs. Also referred to as distributed generation, these systems contribute to greenhouse gas (GHG) emission reductions, demand reductions and reduced customer electricity purchases reduction, which results in improved electric grid reliability through better use of transmission and distribution systems.

Preliminary screenings were performed to determine if an on-site generation measure could be a cost-effective solution for your facility. Before deciding to install an on-site generation system, we recommend conducting a feasibility study to analyze existing energy profiles, siting, interconnection, and the costs associated with the generation project including interconnection costs, departing load charges, and any additional special facilities charges.

6.1 Solar Photovoltaic

Photovoltaic (PV) panels convert sunlight into electricity. Individual panels are combined into an array that produces direct current (DC) electricity. The DC current is converted to alternating current (AC) through an inverter. The inverter is then connected to the building's electrical distribution system.

A preliminary screening based on the facility's electric demand, size and location of free area, and shading elements shows that the facility has **high** potential for installing a PV array.

The amount of free area, ease of installation (location), and the lack of shading elements contribute to the high potential. A PV array located on the ground may be feasible. If you are interested in pursuing the installation of PV, we recommend conducting a full feasibility study.

The graphic below displays the results of the PV potential screening conducted as a part of this audit. The position of each slider indicates the potential (potential increases to the right) that each factor contributes to the overall site potential.

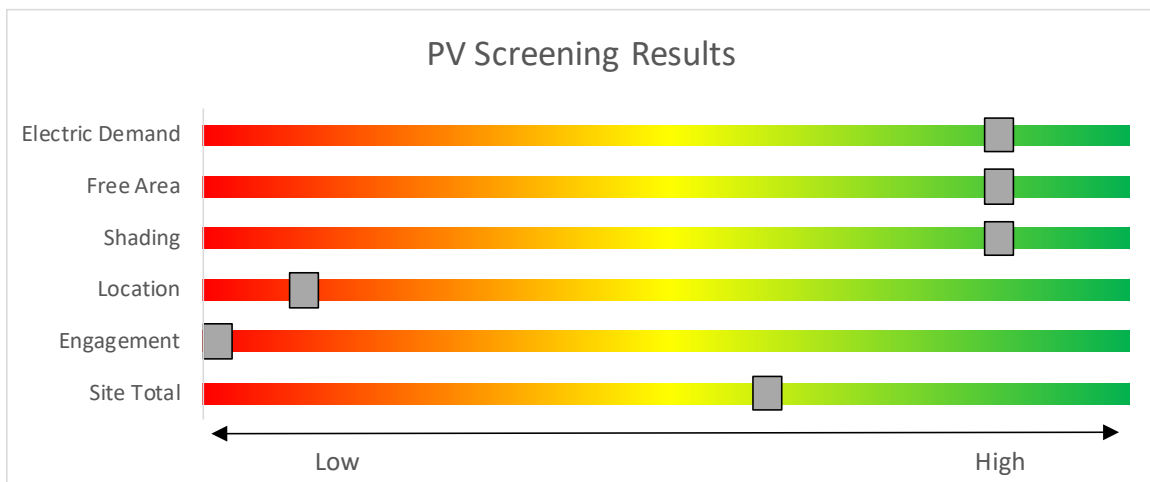


Figure 9 - Photovoltaic Screening

Solar Renewable Energy Credit (SREC) Registration Program

Rebates are not available for solar projects, but owners of solar projects MUST register their projects in the SREC Registration Program before starting construction. Once your PV system is up and running, you periodically earn credits, which can then be sold on the open market for up to 15 years.

If you are considering installing solar photovoltaics on your building, visit www.njcleanenergy.com/srec for more information about the SREC Registration Program.

Get more information about solar power in New Jersey or find a qualified solar installer who can help you decide if solar is right for your building:

- **Basic Info on Solar PV in New Jersey:** www.njcleanenergy.com/whysolar
- **New Jersey Solar Market FAQs:** www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-transition/solar-market-faqs
- **Approved Solar Installers in the New Jersey Market:** www.njcleanenergy.com/commercial-industrial/programs/nj-smartstart-buildings/tools-and-resources/tradeally/approved_vendorsearch/?id=60&start=1

6.2 Combined Heat and Power

Combined heat and power (CHP) generates electricity at the facility and puts waste heat energy to good use. Common types of CHP systems are reciprocating engines, microturbines, fuel cells, backpressure steam turbines, and (at large facilities) gas turbines.

CHP systems typically produce a portion of the electric power used on-site, with the balance of electric power needs supplied by the local utility company. The heat is used to supplement (or replace) existing boilers and provide space heating and/or domestic hot water heating. Waste heat can also be routed through absorption chillers for space cooling.

The key criteria used for screening is the amount of time that the CHP system would operate at full load and the facility's ability to use the recovered heat. Facilities with a continuous need for large quantities of waste heat are the best candidates for CHP.

A preliminary screening based on heating and electrical demand, siting, and interconnection shows that the facility has **high** potential for installing a cost-effective CHP system.

The magnitude, type, and duration of the thermal demand, the coincident electric load, and the ease of interconnection contribute to the potential for CHP at the site. Based on the amount of hot water used throughout the year and the concurrent electric demand a Reciprocal Engine may be feasible. If there is interest in pursuing combined heat and power, we recommend performing a detailed feasibility study, which will provide a thorough understanding of the costs and savings associated with this technology.

The graphic below displays the results of the CHP potential screening conducted as a part of this audit. The position of each slider indicates the potential (potential increases to the right) that each factor contributes to the overall site potential.

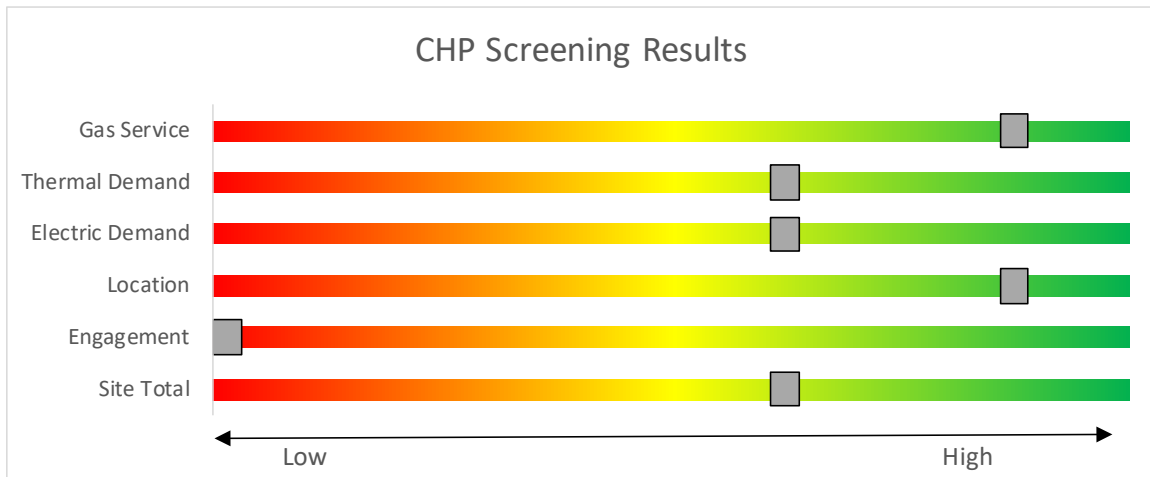


Figure 10 - Combined Heat and Power Screening

Find a qualified firm that specializes in commercial CHP cost assessment and installation: http://www.njcleanenergy.com/commercial-industrial/programs/nj-smartstart-buildings/tools-and-resources/tradeally/approved_vendorsearch/

7 PROJECT FUNDING AND INCENTIVES

Ready to improve your building’s performance? Pick the program that works best for you. Incentive programs that may apply are identified in the Executive Summary. This section provides an overview of currently available New Jersey’s Clean Energy Programs.

	SmartStart <i>Flexibility to install at your own pace</i>	Direct Install <i>Turnkey installation</i>	Pay for Performance <i>Whole building upgrades</i>
Who should use it?	Buildings installing individual measures or small group of measures.	Small to mid-size facilities that can bundle multiple measures together. Average peak demand should be below 200 kW. Not suitable for significant building shell issues.	Mid to large size facilities looking to implement as many measures as possible at one time. Peak demand should be over 200 kW.
How does it work?	Use in-house staff or your preferred contractor.	Pre-approved contractors pass savings along to you via reduced material and labor costs.	Whole-building approach to energy upgrades designed to reduce energy use by at least 15%. The more you save, the higher the incentives.
What are the Incentives?	Fixed incentives for specific energy efficiency measures.	Incentives pay up to 70% of eligible costs, up to \$125,000 per project. You pay the remaining 30% directly to the contractor.	Up to 25% of installation cost, calculated based on level of energy savings per square foot.
How do I participate?	Submit an application for the specific equipment to be installed.	Contact a participating contractor in your region.	Contact a pre-qualified Partner to develop your Energy Reduction Plan and set your energy savings targets.
<p>Take the next step by visiting www.njcleanenergy.com for program details, applications, and to contact a qualified contractor.</p>			

7.1 SmartStart



SmartStart offers incentives for installing prescriptive and custom energy efficiency measures at your facility. This program provides an effective mechanism for securing incentives for energy efficiency measures installed individually or as part of a package of energy upgrades. This program serves most common equipment types and sizes.

SmartStart routinely adds, removes, or modifies incentives from year-to-year for various energy efficient equipment based on market trends and new technologies.

Equipment with Prescriptive Incentives Currently Available:

Electric Chillers
Electric Unitary HVAC
Gas Cooling
Gas Heating
Gas Water Heating
Ground Source Heat Pumps
Lighting

Lighting Controls
Refrigeration Doors
Refrigeration Controls
Refrigerator/Freezer Motors
Food Service Equipment
Variable Frequency Drives

Incentives

The SmartStart Prescriptive program provides fixed incentives for specific energy efficiency measures. Prescriptive incentives vary by equipment type.

SmartStart Custom provides incentives for more unique or specialized technologies or systems that are not addressed through prescriptive incentives. Custom incentives are calculated at \$0.16/kWh and \$1.60/therm based on estimated annual savings. Incentives are capped at 50% of the total installed incremental project cost, or a project cost buy down to a one-year payback (whichever is less). Program incentives are capped at \$500,000 per electric account and \$500,000 per natural gas account, per fiscal year.

How to Participate

Submit an application for the specific equipment to be installed. Many applications are designed as rebates, although others require application approval prior to installation. You can work with your preferred contractor or use internal staff to install measures.

Visit www.njcleanenergy.com/SSB for a detailed program description, instructions for applying, and applications.

7.2 Pay for Performance - Existing Buildings



Pay for Performance works for larger customers with a peak demand over 200 kW. The minimum installed scope of work must include at least two unique measures that results in at least 15% source energy savings, and lighting cannot make up most of the savings. P4P is a generally a good option for medium-to-large sized facilities looking to implement as many

measures as possible under a single project to achieve deep energy savings. This program has an added benefit of addressing measures that may not qualify for other programs. Many facilities pursuing an Energy Savings Improvement Program loan also use this program.

Incentives

Incentives are based on estimated and achieved energy savings ranging from \$0.18-\$0.22/kWh and \$1.80-\$2.50/therm, capped at the lesser of 50% total project cost, or \$1 million per electric account and \$1 million per natural gas account, per fiscal year, not to exceed \$2 million per project. An incentive of \$0.15/square foot is also available to offset the cost of developing the Energy Reduction Plan (see below) contingent on the project moving forward with measure installation.

How to Participate

Contact one of the pre-approved consultants and contractors (“Partners”). Under direct contract to you, they will help further evaluate the measures identified in this report through development of the energy reduction plan, assist you in implementing selected measures, and verify actual savings one year after the installation. Your Partner will also help you apply for incentives.

Approval of the final scope of work is required by the program prior to installation. Installation can be done by the contractor of your choice (some P4P Partners are also contractors) or by internal staff, but the Partner remains involved throughout construction to ensure compliance with the program requirements.

Detailed program descriptions, instructions for applying, applications and list of Partners can be found at: www.njcleanenergy.com/P4P.

7.3 Combined Heat and Power

The Combined Heat & Power (CHP) program provides incentives for eligible CHP or waste heat to power (WHP) projects. Eligible CHP or WHP projects must achieve an annual system efficiency of at least 65% (lower heating value, or LHV), based on total energy input and total utilized energy output. Mechanical energy may be included in the efficiency evaluation.

Incentives

Eligible Technologies	Size (Installed Rated Capacity) ¹	Incentive (\$/kW)	% of Total Cost Cap per Project ³	\$ Cap per Project ³	
Powered by non-renewable or renewable fuel source ⁴	≤500 kW	\$2,000	30-40% ²	\$2 million	
	Gas Internal Combustion Engine	>500 kW - 1 MW			\$1,000
	Gas Combustion Turbine	> 1 MW - 3 MW	\$550	30%	\$3 million
	Microturbine Fuel Cells with Heat Recovery	>3 MW	\$350		
Waste Heat to Power*	<1 MW	\$1,000	30%	\$2 million	
	> 1MW	\$500		\$3 million	

*Waste Heat to Power: Powered by non-renewable fuel source, heat recovery or other mechanical recovery from existing equipment utilizing new electric generation equipment (e.g. steam turbine).

Check the NJCEP website for details on program availability, current incentive levels, and requirements.

How to Participate

You work with a qualified developer or consulting firm to complete the CHP application. Once the application is approved the project can be installed. Information about the CHP program can be found at: www.njcleanenergy.com/CHP.

7.4 Energy Savings Improvement Program

The Energy Savings Improvement Program (ESIP) serves New Jersey's government agencies by financing energy projects. An ESIP is a type of performance contract, whereby school districts, counties, municipalities, housing authorities and other public and state entities enter in to contracts to help finance building energy upgrades. Annual payments are lower than the savings projected from the ECMs, ensuring that ESIP projects are cash flow positive for the life of the contract.

ESIP provides government agencies in New Jersey with a flexible tool to improve and reduce energy usage with minimal expenditure of new financial resources. NJCEP incentive programs described above can also be used to help further reduce the total project cost of eligible measures.

How to Participate

This LGEA report is the first step to participating in ESIP. Next, you will need to select an approach for implementing the desired ECMs:

- (1) Use an energy services company or "ESCO."
- (2) Use independent engineers and other specialists, or your own qualified staff, to provide and manage the requirements of the program through bonds or lease obligations.
- (3) Use a hybrid approach of the two options described above where the ESCO is used for some services and independent engineers, or other specialists or qualified staff, are used to deliver other requirements of the program.

After adopting a resolution with a chosen implementation approach, the development of the energy savings plan (ESP) can begin. The ESP demonstrates that the total project costs of the ECMs are offset by the energy savings over the financing term, not to exceed 15 years. The verified savings will then be used to pay for the financing.

The ESIP approach may not be appropriate for all energy conservation and energy efficiency improvements. Carefully consider all alternatives to develop an approach that best meets your needs. A detailed program descriptions and application can be found at: www.njcleanenergy.com/ESIP.

ESIP is a program delivered directly by the NJBPU and is not an NJCEP incentive program. As mentioned above, you can use NJCEP incentive programs to help further reduce costs when developing the energy savings plan. Refer to the ESIP guidelines at the link above for further information and guidance on next steps.

7.5 SREC Registration Program

The SREC Registration Program (SRP) is used to register the intent to install solar projects in New Jersey. Rebates are not available for solar projects, but owners of solar projects *must* register their projects prior to the start of construction to establish the project's eligibility to earn SRECs. Registration of the intent to participate in New Jersey's solar marketplace provides market participants with information about the pipeline of anticipated new solar capacity and insight into future SREC pricing.

After the registration is accepted, construction is complete, and final paperwork has been submitted and is deemed complete, the project is issued a New Jersey certification number, which enables it to generate New Jersey SRECs. SREC's are generated once the solar project has been authorized to be energized by the Electric Distribution Company (EDC).

Each time a solar installation generates 1,000 kilowatt-hours (kWh) of electricity, an SREC is earned. Solar project owners report the energy production to the SREC Tracking System. This reporting allows SREC's to be placed in the customer's electronic account. SRECs can then be sold on the SREC Tracking System, providing revenue for the first 15 years of the project's life.

Electricity suppliers, the primary purchasers of SRECs, are required to pay a Solar Alternative Compliance Payment (SACP) if they do not meet the requirements of New Jersey's Solar Renewable Portfolio Standard. Purchasing SRECs can help them meet those requirements. As SRECs are traded in a competitive market, the price may vary significantly. The actual price of an SREC during a trading period fluctuates depending on supply and demand.

Information about the SRP can be found at: www.njcleanenergy.com/srec.

8 ENERGY PURCHASING AND PROCUREMENT STRATEGIES

8.1 Retail Electric Supply Options

Energy deregulation in New Jersey has increased energy buyers' options by separating the function of electricity distribution from that of electricity supply. So, though you may choose a different company from which to buy your electric power, responsibility for your facility's interconnection to the grid and repair to local power distribution will still reside with the traditional utility company serving your region.

If your facility is not purchasing electricity from a third-party supplier, consider shopping for a reduced rate from third-party electric suppliers. If your facility already buys electricity from a third-party supplier, review and compare prices at the end of each contract year.

A list of licensed third-party electric suppliers is available at the NJBPU website⁸.

8.2 Retail Natural Gas Supply Options

The natural gas market in New Jersey is also deregulated. Most customers that remain with the utility for natural gas service pay rates that are market-based and that fluctuate monthly. The utility provides basic gas supply service (BGSS) to customers who choose not to buy from a third-party supplier for natural gas commodity.

A customer's decision about whether to buy natural gas from a retail supplier typically depends on whether a customer prefers budget certainty and/or longer-term rate stability. Customers can secure longer-term fixed prices by signing up for service through a third-party retail natural gas supplier. Many larger natural gas customers may seek the assistance of a professional consultant to assist in their procurement process.

If your facility does not already purchase natural gas from a third-party supplier, consider shopping for a reduced rate from third-party natural gas suppliers. If your facility already purchases natural gas from a third-party supplier, review and compare prices at the end of each contract year.

A list of licensed third-party natural gas suppliers is available at the NJBPU website⁹.

⁸ www.state.nj.us/bpu/commercial/shopping.html.

⁹ www.state.nj.us/bpu/commercial/shopping.html

APPENDIX A: EQUIPMENT INVENTORY & RECOMMENDATIONS

Lighting Inventory & Recommendations

Location	Existing Conditions						Proposed Conditions						Energy Impact & Financial Analysis								
	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
MER #8	32	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	32	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	1.4	12,677	-3	\$1,220	\$2,248	\$460	1.5
MER #8	1	Exit Signs: LED - 2 W Lamp	Wall Switch	S	6	8,760		None	No	1	Exit Signs: LED - 2 W Lamp	Wall Switch	6	8,760	0.0	0	0	\$0	\$0	\$0	0.0
4th floor - ICU Room #1	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #1	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #1	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #2	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #2	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #2	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #3	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #3	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #3	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #4	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #4	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #4	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #5	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #5	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #5	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #6	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #6	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #6	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #7	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #7	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #7	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #8	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #8	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
4th floor - ICU Room #8	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #9	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #9	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #9	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #10	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #10	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #10	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #11	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #11	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #11	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #12	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #12	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #12	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #13	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #13	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #13	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #14	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #14	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #14	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #15	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #15	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #15	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4
4th floor - ICU Room #16	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	528	0	\$51	\$73	\$20	1.0
4th floor - ICU Room #16	2	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
4th floor - ICU Room #16	1	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	50	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	387	0	\$37	\$17	\$1	0.4

Location	Existing Conditions						Proposed Conditions							Energy Impact & Financial Analysis							
	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
ICU Open office	18	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	S	9	8,736		None	No	18	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	0	0	\$0	\$0	\$0	0.0
ICU Open office	16	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	16	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
ICU Open office	21	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	21	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nourishment station	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$270	\$35	27.8
Break Room	8	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	8	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.1	507	0	\$49	\$487	\$43	9.1
Supplies	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$0	6.9
Waiting room	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$270	\$35	4.6
Waiting room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.1	991	0	\$95	\$110	\$30	0.8
Waiting room	1	Linear Fluorescent - T5: 3' T5 (21W) - 1L	Wall Switch	S	27	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.0	156	0	\$15	\$18	\$5	0.9
Manager office	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$20	4.3
Storage	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$0	5.2
Restroom	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.1	623	0	\$60	\$73	\$20	0.9
Restroom	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$270	\$35	27.8
Hallway	36	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	36	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Closet	1	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 2' Lamps	Wall Switch	17	8,736	0.0	151	0	\$15	\$33	\$6	1.8
Hallway	3	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	3	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.2	1,585	0	\$153	\$219	\$60	1.0
Hallway	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
4th floor - South wing Room 451	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 452	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 453	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 454	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 455	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 456	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 457	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 458	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
4th floor - South wing Room 459	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
4th floor - South wing Room 460	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
Room 451	13	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	13	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 451	5	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	5	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 451	4	Exit Signs: LED - 2 W Lamp	None	S	6	8,760		None	No	4	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.0	0	0	\$0	\$0	\$0	0.0
Staff	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	S	40	6,028	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	4,159	0.0	161	0	\$16	\$116	\$20	6.2
Restroom	1	Linear Fluorescent - T8: 3' T8 (25W) - 2L	Wall Switch	S	48	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) 3' Lamps	Occupancy Sensor	21	6,028	0.0	316	0	\$30	\$307	\$45	8.6
Closet	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$116	\$0	10.3
Closet	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
Pantry	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$116	\$20	8.5
Storage	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$116	\$0	10.3
Soil Room	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$20	4.3
Hallway	3	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	3	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	110	0	\$11	\$82	\$3	7.4
Closet	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$116	\$20	11.4
Monitor Storage	2	Linear Fluorescent - T8: 4' T8 (32W) - 3L	Wall Switch	S	93	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (3) 4' Lamps	Occupancy Sensor	44	6,028	0.1	1,189	0	\$114	\$226	\$65	1.4
Office	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
4th floor - East 433 to 443	10	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	10	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	368	0	\$35	\$272	\$10	7.4
4th floor - East 433 to 443	40	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	40	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	2.4	21,134	-5	\$2,034	\$2,921	\$800	1.0
Restroom	10	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	10	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.1	634	0	\$61	\$542	\$45	8.1
4th floor - East 433 to 443	10	Incandescent: Screw-in 1 Lamp	Wall Switch	S	60	8,736	2	Relamp	No	10	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.5	4,812	-1	\$463	\$172	\$10	0.4
Nurse's station	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	790	0	\$76	\$270	\$35	3.1
Restroom	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	1	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.0	63	0	\$6	\$27	\$1	4.3
Restroom	2	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 2' Lamps	Occupancy Sensor	17	6,028	0.0	401	0	\$39	\$335	\$47	7.5
Storage 431	2	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (4) 4' Lamps	Occupancy Sensor	58	6,028	0.2	1,396	0	\$134	\$346	\$75	2.0
Restroom	2	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.1	740	0	\$71	\$415	\$55	5.1

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Restroom	1	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) 2' Lamps	Occupancy Sensor	17	6,028	0.0	201	0	\$19	\$303	\$41	13.5
Staff breakroom	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$20	4.3
Staff breakroom	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	37	0	\$4	\$27	\$1	7.4
Restroom	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	1	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.0	63	0	\$6	\$297	\$36	42.8
4th floor West: 405 to 411	16	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	16	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
4th floor West: 405 to 411	8	Incandescent: Screw-in 1 Lamp	Wall Switch	S	60	8,736	2	Relamp	No	8	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.4	3,849	-1	\$370	\$281	\$8	0.7
4th floor West: 405 to 411	8	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	8	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.1	521	0	\$50	\$217	\$8	4.2
4th floor West: 405 to 411	8	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	8	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	294	0	\$28	\$217	\$8	7.4
Nurse's station	13	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	13	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	1,141	0	\$110	\$270	\$35	2.1
Nurse's station	2	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	2	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	130	0	\$13	\$54	\$2	4.2
Nurse's station	2	Linear Fluorescent - T5: 3' T5 (21W) - 1L	Wall Switch	S	27	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.0	311	0	\$30	\$37	\$10	0.9
Nurse's station	5	Exit Signs: LED - 2 W Lamp	None	S	6	8,760		None	No	5	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.0	0	0	\$0	\$0	\$0	0.0
Stairwell	32	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	32	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.6	5,284	-1	\$508	\$584	\$160	0.8
2nd floor IT room	23	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	23	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.2	2,018	0	\$194	\$540	\$70	2.4
Restroom	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$270	\$35	27.8
Restroom	4	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2, 3	Relamp	Yes	4	LED - Linear Tubes: (1) 2' Lamp	Occupancy Sensor	9	6,028	0.1	609	0	\$59	\$335	\$47	4.9
Data center	13	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	52	8,736	2, 3	Relamp	Yes	13	LED Screw-In Lamps: Screw-in 2 lamps	Occupancy Sensor	36	6,028	0.4	3,297	-1	\$317	\$718	\$61	2.1
IT Room	4	Exit Signs: LED - 2 W Lamp	None	S	6	8,760		None	No	4	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.0	0	0	\$0	\$0	\$0	0.0
Nursing Admin	20	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	20	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nursing Admin	2	Exit Signs: LED - 2 W Lamp	None	S	6	8,760		None	No	2	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.0	0	0	\$0	\$0	\$0	0.0
Private office	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$270	\$35	4.6
Conference room	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Conference room	3	Exit Signs: LED - 2 W Lamp	None	S	6	8,760		None	No	3	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.0	0	0	\$0	\$0	\$0	0.0
Training	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$270	\$35	4.6
Restroom	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	792	0	\$76	\$343	\$55	3.8

Location	Existing Conditions						Proposed Conditions						Energy Impact & Financial Analysis								
	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Outcomes/Casemanagement 2nd Floor: Closet	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2, 3	Relamp	Yes	1	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	16	6,028	0.0	112	0	\$11	\$143	\$1	13.2
Office 1, 2, 3	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Utilization office	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	468	0	\$45	\$116	\$20	2.1
Infection office	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Infection office	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$20	4.3
Case Management	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$20	4.3
Quality Managment	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$116	\$20	1.9
Hallway	19	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	19	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Lobby	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
UPS Room	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Case Management	8	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	8	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	936	0	\$90	\$270	\$35	2.6
Bariatric office	10	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	10	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	877	0	\$84	\$270	\$35	2.8
Bariatric center	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Dr. Office	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Exam 1	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Exam 2	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nutritionist	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Restroom	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$270	\$35	13.9
2nd floor East: Room 239	4	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	4	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.1	1,094	0	\$105	\$290	\$40	2.4
2nd floor East: Room 239	2	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	255	0	\$25	\$33	\$6	1.1
2nd floor East: Room 239	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	65	0	\$6	\$27	\$1	4.2
2nd floor East: Room 240	4	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	4	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.1	1,094	0	\$105	\$290	\$40	2.4
2nd floor East: Room 240	2	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	255	0	\$25	\$33	\$6	1.1
2nd floor East: Room 240	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	65	0	\$6	\$27	\$1	4.2
Room 233, 234, 235, 236, 237, 238, 243	7	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	7	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.1	456	0	\$44	\$190	\$7	4.2

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 233, 234, 235, 236, 237, 238, 243	7	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	7	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.2	1,915	0	\$184	\$507	\$70	2.4
Room 233, 234, 235, 236, 237, 238, 243	14	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	14	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.8	7,397	-2	\$712	\$1,022	\$280	1.0
Room 233, 234, 235, 236, 237, 238, 243	7	Incandescent: Screw-in 1 lamp	Wall Switch	S	150	8,736	2	Relamp	No	7	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	1.0	8,421	-2	\$810	\$246	\$7	0.3
Hallway	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Restroom	1	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.0	370	0	\$36	\$342	\$45	8.4
Restroom	2	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (1) 2' Lamp	Occupancy Sensor	9	6,028	0.0	304	0	\$29	\$303	\$41	8.9
Closet	1	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.0	274	0	\$26	\$72	\$10	2.4
Clean Storage	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$0	6.9
Office	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Nurse's office	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$116	\$20	1.9
Locker room	3	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	3	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.0	190	0	\$18	\$198	\$23	9.5
Hallway	1	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Wall Switch	S	176	8,736	2	Relamp	No	1	LED - Linear Tubes: (6) 4' Lamps	Wall Switch	87	8,736	0.1	840	0	\$81	\$110	\$30	1.0
Hallway	3	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	3	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.2	1,585	0	\$153	\$219	\$60	1.0
Hallway	2	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	2	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.1	1,057	0	\$102	\$146	\$40	1.0
Hallway	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.1	623	0	\$60	\$73	\$20	0.9
Hallway	2	Linear Fluorescent - T8: 4' T8 (32W) - 3L	Wall Switch	S	93	8,736	2	Relamp	No	2	LED - Linear Tubes: (3) 4' Lamps	Wall Switch	44	8,736	0.1	934	0	\$90	\$110	\$30	0.9
Hallway	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
Storage	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	234	0	\$23	\$116	\$0	5.2
Storage	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (1) 2' Lamp	Occupancy Sensor	9	6,028	0.0	152	0	\$15	\$286	\$38	16.9
Restroom	2	Compact Fluorescent: Screw-in 1 Lamp	Occupancy Sensor	S	13	6,028	2, 3	Relamp	Yes	2	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	4,159	0.0	88	0	\$8	\$170	\$2	20.0
Break Room	9	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	36	8,736	2, 3	Relamp	Yes	9	LED Screw-In Lamps: Screw-in 2 lamps	Occupancy Sensor	25	6,028	0.2	1,580	0	\$152	\$580	\$53	3.5
Endo storage	3	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	3	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	1,189	0	\$114	\$226	\$65	1.4
Dr. Yo unes	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Occupancy Sensor	S	62	6,028	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	4,159	0.1	547	0	\$53	\$343	\$55	5.5
Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	6,028	0.0	208	0	\$20	\$288	\$40	12.4
2nd floor South: Waiting area	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0

		Existing Conditions						Proposed Conditions						Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Restroom	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$270	\$35	20.9
Staff room	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$270	\$35	20.9
Open area	17	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	17	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Private rooms	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Private rooms	3	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	3	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.2	1,585	0	\$153	\$219	\$60	1.0
Overhead (Bed)	4	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	4	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.2	2,113	0	\$203	\$292	\$80	1.0
Utility	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
Utility	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Preprocessing 1	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Preprocessing 1	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Endo Ste C	6	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	6	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.2	1,642	0	\$158	\$435	\$60	2.4
Endo Ste C	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	792	0	\$76	\$73	\$20	0.7
Office	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$270	\$35	27.8
Nourishment station	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
2nd floor West: Room 201	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 201	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 201	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 202	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 202	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 202	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 203	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 203	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 203	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 204	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 204	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
2nd floor West: Room 204	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 205	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 205	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 205	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 206	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 206	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 206	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 207	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 207	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 207	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 208	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 208	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 208	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 209	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 209	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 209	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 210	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 210	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 210	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
2nd floor West: Room 211	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor West: Room 211	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
2nd floor West: Room 211	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
Hallways	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nurse's Station	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 212	1	LED - Fixtures: Ambient 2x4 Fixture	Wall Switch	S	40	8,736		None	No	1	LED - Fixtures: Ambient 2x4 Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 212	1	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	30	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	21	8,736	0.0	85	0	\$8	\$27	\$1	3.2
Room 212	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
Room 201 to 211	11	LED - Fixtures: Ambient - 4' - Direct/Indirect Fixture	Wall Switch	S	48	8,736		None	No	11	LED - Fixtures: Ambient - 4' - Direct/Indirect Fixture	Wall Switch	48	8,736	0.0	0	0	\$0	\$0	\$0	0.0
2nd floor North: Closet	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
Restroom hall	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	S	30	6,028		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	0	0	\$0	\$0	\$0	0.0
Restroom hall	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Occupancy Sensor	S	62	6,028	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	4,159	0.0	273	0	\$26	\$307	\$45	9.9
Closet	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$116	\$0	10.3
Supply room	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	792	0	\$76	\$343	\$55	3.8
Office	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	351	0	\$34	\$116	\$20	2.8
Classroom	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	468	0	\$45	\$116	\$20	2.1
Room 214	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 214	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 214	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 214	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 215	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 215	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 215	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 215	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 216	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 216	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 216	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 216	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 217	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 217	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 217	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 217	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 218	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 218	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 218	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 218	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 219	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 219	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 219	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 219	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 220	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 220	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 220	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 220	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 221	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 221	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 221	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 221	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 222	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 222	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 222	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 222	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 223	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 223	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 223	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 223	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 224	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 224	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 224	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 224	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 225	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 225	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 225	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 225	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 226	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 226	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 226	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 226	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 227	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 227	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 227	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 227	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 228	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 228	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 228	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 228	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 229	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 229	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 229	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 229	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Hallway	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
3rd floor North: Closet	1	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.0	127	0	\$12	\$16	\$3	1.1
Restroom hall	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	S	30	6,028		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	0	0	\$0	\$0	\$0	0.0
Restroom hall	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Occupancy Sensor	S	62	6,028	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	4,159	0.0	273	0	\$26	\$307	\$45	9.9
Closet	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	117	0	\$11	\$116	\$20	8.5
Supply room	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	792	0	\$76	\$343	\$55	3.8
Office	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	351	0	\$34	\$116	\$20	2.8
Classroom	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	468	0	\$45	\$116	\$20	2.1
Room 314	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 314	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 314	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 314	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 315	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 315	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 315	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 315	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 316	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 316	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 316	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 316	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 317	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 317	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 317	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 317	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 318	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 318	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 318	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 318	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 319	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 319	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 319	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 319	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 320	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 320	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 320	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 320	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 321	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 321	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 321	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 321	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 322	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 322	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 322	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 322	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 323	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 323	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 323	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 323	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 324	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 324	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 324	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 324	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 325	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 325	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 325	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 325	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 326	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 326	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 326	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 326	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 327	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 327	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 327	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 327	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 328	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 328	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 328	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 328	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 329	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 329	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient 2x2 Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 329	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 329	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	1	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Hallway	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
3rd floor West: Card cath	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Cardiac cath	3	Linear Fluorescent - T5: 3' T5 (21W) - 1L	Wall Switch	S	27	8,736	2	Relamp	No	3	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.1	467	0	\$45	\$55	\$15	0.9

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Reception	2	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2	Relamp	No	2	LED - Linear Tubes: (2) 2' Lamps	Wall Switch	17	8,736	0.0	302	0	\$29	\$65	\$12	1.8
Office	2	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) 2' Lamps	Occupancy Sensor	17	6,028	0.0	401	0	\$39	\$335	\$47	7.5
Office hallway	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.1	623	0	\$60	\$73	\$20	0.9
Stage 2 recovery	1	Linear Fluorescent - T8: 4' T8 (32W) - 3L	Wall Switch	S	93	8,736	2	Relamp	No	1	LED - Linear Tubes: (3) 4' Lamps	Wall Switch	44	8,736	0.1	467	0	\$45	\$55	\$15	0.9
Stage 2 recovery	2	Compact Fluorescent: Pin based - 1 lamp	Wall Switch	S	23	8,736	2	Relamp	No	2	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	16	8,736	0.0	130	0	\$13	\$109	\$0	8.7
Stage 2 recovery	11	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	11	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.2	1,432	0	\$138	\$598	\$0	4.3
Stage 2 recovery	3	Linear Fluorescent - T8: 4' T8 (32W) - 3L	Wall Switch	S	93	8,736	2	Relamp	No	3	LED - Linear Tubes: (3) 4' Lamps	Wall Switch	44	8,736	0.2	1,401	0	\$135	\$164	\$45	0.9
Restroom	2	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	2	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.0	260	0	\$25	\$109	\$0	4.3
Stage 1 recovery	10	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	S	10	8,736		None	No	10	LED Screw-In Lamps: Screw-in 1 Lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Stage 1 recovery	7	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	7	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	911	0	\$88	\$381	\$0	4.3
Stage 1 recovery	4	Linear Fluorescent - T8: 4' T8 (32W) - 3L	Wall Switch	S	93	8,736	2	Relamp	No	4	LED - Linear Tubes: (3) 4' Lamps	Wall Switch	44	8,736	0.2	1,868	0	\$180	\$219	\$60	0.9
Vascular lab hallway	9	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	9	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.3	2,802	-1	\$270	\$329	\$90	0.9
EER closet	1	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.0	370	0	\$36	\$342	\$45	8.4
Break Room	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Break Room	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Locker	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Locker	1	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	1	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.0	130	0	\$13	\$54	\$0	4.3
Hall Cath	4	Linear Fluorescent - T5: 3' T5 (21W) - 1L	Wall Switch	S	27	8,736	2	Relamp	No	4	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.1	623	0	\$60	\$73	\$20	0.9
Hall Cath	4	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	4	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	521	0	\$50	\$217	\$0	4.3
Room 333	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 333	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 334	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 334	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 335	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room 335	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 336	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 336	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 337	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 337	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 338	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 338	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 339	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 339	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 340	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 340	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 341	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 341	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 342	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 342	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Room 343	5	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	5	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.1	651	0	\$63	\$272	\$0	4.3
Room 343	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Hallway	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nurse's station	13	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	13	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nurse's station	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.0	147	0	\$14	\$109	\$4	7.4
Room 332	3	Compact Fluorescent: Pin based - 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	3	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	32	8,736	0.0	391	0	\$38	\$163	\$0	4.3
Room 332	2	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2	Relamp	No	2	LED - Linear Tubes: (2) 2' Lamps	Wall Switch	17	8,736	0.0	302	0	\$29	\$65	\$12	1.8
3rd common area	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nourishment station	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Storage	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$166	\$0	9.8

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Soiled Room	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$20	5.7
Volunteer office	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$116	\$20	1.9
3rd floor South: Storage	2	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.1	740	0	\$71	\$415	\$55	5.1
Storage	3	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	3	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.0	190	0	\$18	\$198	\$23	9.5
X-ray machine room	12	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	12	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.4	3,283	-1	\$316	\$870	\$120	2.4
X-ray machine room	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	165	0	\$16	\$18	\$5	0.8
Common area	15	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	15	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.5	4,104	-1	\$395	\$1,087	\$150	2.4
Common area	4	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	26	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	18	8,736	0.0	294	0	\$28	\$109	\$4	3.7
Workshops	5	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	5	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.2	1,851	0	\$178	\$632	\$85	3.1
Restroom	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$270	\$35	27.8
Telemetry monitoring	1	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 2' Lamps	Wall Switch	17	8,736	0.0	151	0	\$15	\$33	\$6	1.8
Telemetry monitoring	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	351	0	\$34	\$116	\$20	2.8
Hallway	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Hallway	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
1st floor: HR hallway	5	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	5	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Guest relation	9	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	9	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Clinical doc office	9	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	9	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.4	3,331	-1	\$321	\$922	\$125	2.5
Clinical doc office	5	Linear Fluorescent - T8: 3' T8 (25W) - 1L	Wall Switch	S	27	8,736	2, 3	Relamp	Yes	5	LED - Linear Tubes: (1) 3' Lamp	Occupancy Sensor	11	6,028	0.1	932	0	\$90	\$361	\$60	3.4
Offices	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.2	1,585	0	\$152	\$416	\$75	2.2
Offices	4	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	4	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.2	1,481	0	\$142	\$560	\$75	3.4
Restroom Men	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	S	40	6,028	3	None	Yes	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	4,159	0.0	161	0	\$16	\$270	\$35	15.1
Restroom Women	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	S	40	6,028		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.0	0	0	\$0	\$0	\$0	0.0
HR Dept	5	Linear Fluorescent - T5: 2' T5 (14W) - 2L	Wall Switch	S	34	8,736	2, 3	Relamp	Yes	5	LED - Linear Tubes: (2) 3' Lamps	Occupancy Sensor	21	6,028	0.1	920	0	\$89	\$453	\$85	4.2
HR Dept	6	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	6	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.3	2,377	-1	\$229	\$489	\$95	1.7
Medical Staff	17	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	17	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Medical records	5	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	5	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	585	0	\$56	\$270	\$35	4.2
Medical staff	19	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	19	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Medical Staff	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Pharmacy	43	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	43	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Pharmacy	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Loading dock	2	Metal Halide: (1) 400W Lamp	Wall Switch	S	458	8,736	1	Fixture Replacement	No	2	LED - Fixtures: Low-Bay	Wall Switch	137	8,736	0.7	6,050	-1	\$582	\$1,251	\$300	1.6
Store room	7	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	7	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	819	0	\$79	\$116	\$0	1.5
Storage	39	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	39	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.5	4,563	-1	\$439	\$464	\$0	1.1
Storage	5	Linear Fluorescent - T5: 2' T5 (14W) - 1L	Wall Switch	S	18	8,736	2, 3	Relamp	Yes	5	LED - Linear Tubes: (1) 3' Lamp	Occupancy Sensor	11	6,028	0.1	507	0	\$49	\$207	\$45	3.3
Pharmacy hall	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Library	13	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	13	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Library	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Chemo room	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Central transport	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
1st floor lobby	28	Compact Fluorescent: Screw-in 2 Lamp	Wall Switch	S	13	8,736	2	Relamp	No	28	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	9	8,736	0.1	1,030	0	\$99	\$965	\$56	9.2
1st floor lobby	6	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	6	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	391	0	\$38	\$163	\$6	4.2
1st floor lobby restroom	1	Linear Fluorescent - T8: 3' T8 (25W) - 1L	Wall Switch	S	27	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (1) 3' Lamp	Occupancy Sensor	11	6,028	0.0	186	0	\$18	\$288	\$40	13.8
1st floor lobby restroom	1	Linear Fluorescent - T8: 3' T8 (25W) - 1L	Wall Switch	S	27	8,736	2, 3	Relamp	Yes	1	LED - Linear Tubes: (1) 3' Lamp	Occupancy Sensor	11	6,028	0.0	186	0	\$18	\$288	\$40	13.8
1st floor lobby restroom	3	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	3	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	195	0	\$19	\$82	\$3	4.2
1st floor lobby restroom	3	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	3	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	195	0	\$19	\$82	\$3	4.2
1st floor lobby	6	Linear Fluorescent - T8: 3' T8 (25W) - 2L	Wall Switch	S	48	8,736	2	Relamp	No	6	LED - Linear Tubes: (2) 3' Lamps	Wall Switch	21	8,736	0.2	1,528	0	\$147	\$219	\$60	1.1
1st floor lobby	3	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	3	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.1	934	0	\$90	\$110	\$30	0.9
1st floor lobby	4	Linear Fluorescent - T8: 3' T8 (25W) - 2L	Wall Switch	S	48	8,736	2	Relamp	No	4	LED - Linear Tubes: (2) 3' Lamps	Wall Switch	21	8,736	0.1	1,019	0	\$98	\$146	\$40	1.1
1st floor lobby	21	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	21	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
1st floor lobby	3	Halogen Incandescent: Decorative fixture	Wall Switch	S	50	8,736	2, 3	Relamp	Yes	3	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	8	6,028	0.1	1,269	0	\$122	\$52	\$3	0.4

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
1st floor lobby	2	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	2	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.0	130	0	\$13	\$54	\$2	4.2
Gift shop	4	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2	Relamp	No	4	LED - Linear Tubes: (1) 2' Lamp	Wall Switch	9	8,736	0.1	509	0	\$49	\$65	\$12	1.1
Gift shop	8	Compact Fluorescent: Screw-in 1 Lamp	Wall Switch	S	23	8,736	2	Relamp	No	8	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	16	8,736	0.1	521	0	\$50	\$217	\$8	4.2
Surgical waiting	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Vestibule	4	Linear Fluorescent - T8: 3' T8 (25W) - 1L	Wall Switch	S	27	8,736	2,4	Relamp	Yes	4	LED - Linear Tubes: (1) 3' Lamp	Daylight Dimming	11	5,242	0.1	781	0	\$75	\$273	\$20	3.4
Medical Rec hall	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Central sterile	26	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	26	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.9	8,095	-2	\$779	\$949	\$260	0.9
Central sterile	20	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	20	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.7	6,227	-1	\$599	\$730	\$200	0.9
Central sterile	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Central sterile	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	1	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2,3	Relamp	Yes	1	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.0	396	0	\$38	\$307	\$45	6.9
Service Hallway	15	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	15	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Restroom	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
EVS	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Break room	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2,3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	792	0	\$76	\$343	\$55	3.8
Director	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2,3	Relamp	Yes	2	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	792	0	\$76	\$343	\$55	3.8
Maintenance shop	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	351	0	\$34	\$116	\$20	2.8
PBX room	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	9	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	790	0	\$76	\$270	\$35	3.1
Morgue	6	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	S	114	8,736	2	Relamp	No	6	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	8,736	0.4	3,170	-1	\$305	\$438	\$120	1.0
Linen	3	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2,3	Relamp	Yes	3	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	1,189	0	\$114	\$380	\$65	2.8
Storage	3	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2,3	Relamp	Yes	3	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	6,028	0.1	1,189	0	\$114	\$226	\$65	1.4
Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
Laundry	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	88	0	\$8	\$270	\$35	27.8
OR equipment	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
OR hallway	15	LED - Fixtures: Ambient 2x4 Fixture	Wall Switch	S	40	8,736		None	No	15	LED - Fixtures: Ambient 2x4 Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Recovery	20	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	20	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Recovery	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
OR 1	10	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Wall Switch	S	176	8,736	2	Relamp	No	10	LED - Linear Tubes: (6) 4' Lamps	Wall Switch	87	8,736	1.0	8,397	-2	\$808	\$1,095	\$300	1.0
Hallway	5	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	150	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	0.7	6,015	-1	\$579	\$86	\$5	0.1
OR 2	10	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Wall Switch	S	176	8,736	2	Relamp	No	10	LED - Linear Tubes: (6) 4' Lamps	Wall Switch	87	8,736	1.0	8,397	-2	\$808	\$1,095	\$300	1.0
Hallway	5	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	150	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	0.7	6,015	-1	\$579	\$86	\$5	0.1
OR 3	10	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Wall Switch	S	176	8,736	2	Relamp	No	10	LED - Linear Tubes: (6) 4' Lamps	Wall Switch	87	8,736	1.0	8,397	-2	\$808	\$1,095	\$300	1.0
Hallway	5	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	150	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	0.7	6,015	-1	\$579	\$86	\$5	0.1
OR 4	10	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Wall Switch	S	176	8,736	2	Relamp	No	10	LED - Linear Tubes: (6) 4' Lamps	Wall Switch	87	8,736	1.0	8,397	-2	\$808	\$1,095	\$300	1.0
Hallway	5	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	150	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	0.7	6,015	-1	\$579	\$86	\$5	0.1
OR 5	10	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Wall Switch	S	176	8,736	2	Relamp	No	10	LED - Linear Tubes: (6) 4' Lamps	Wall Switch	87	8,736	1.0	8,397	-2	\$808	\$1,095	\$300	1.0
Hallway	5	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	150	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	0.7	6,015	-1	\$579	\$86	\$5	0.1
Minor Surgery	7	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	7	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.2	2,179	0	\$210	\$256	\$70	0.9
Minor Surgery	5	Halogen Incandescent: Screw-in 1 Lamp	Wall Switch	S	150	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	23	8,736	0.7	6,015	-1	\$579	\$86	\$5	0.1
Same day surgery	35	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	35	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Same day surgery	4	Linear Fluorescent - T5: 2' T5 (14W) - 1L	Wall Switch	S	18	8,736	2	Relamp	No	4	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.0	283	0	\$27	\$73	\$20	1.9
Main hallway	24	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	24	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Radiology	13	Compact Fluorescent: Screw-in 2 Lamp	Wall Switch	S	46	8,736	2	Relamp	No	13	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.2	1,693	0	\$163	\$448	\$26	2.6
Restroom	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
ED Room	51	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	51	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nurse's station	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Nurse's station	3	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	3	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.0	391	0	\$38	\$103	\$6	2.6
Nurse's station	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	4	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.1	1,245	0	\$120	\$146	\$40	0.9
Equipment room	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	351	0	\$34	\$116	\$20	2.8
ED Common	60	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	60	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Guest room	5	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 3	Relamp	Yes	5	LED - Linear Tubes: (2) U-Lamp	Occupancy Sensor	33	6,028	0.2	1,851	0	\$178	\$632	\$85	3.1
Restroom	3	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Occupancy Sensor	S	33	6,028	2, 3	Relamp	Yes	3	LED - Linear Tubes: (2) 2' Lamps	Occupancy Sensor	17	4,159	0.1	415	0	\$40	\$368	\$53	7.9
Restroom	3	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Occupancy Sensor	S	33	6,028	2, 3	Relamp	Yes	3	LED - Linear Tubes: (2) 2' Lamps	Occupancy Sensor	17	4,159	0.1	415	0	\$40	\$368	\$53	7.9
ED Common area	39	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	39	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Fast track	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	2	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
P.C.C	3	Linear Fluorescent - T8: 4' T8 (32W) - 3L	Wall Switch	S	93	8,736	2	Relamp	No	3	LED - Linear Tubes: (3) 4' Lamps	Wall Switch	44	8,736	0.2	1,401	0	\$135	\$164	\$45	0.9
P.C.C	13	Compact Fluorescent: Screw-in 2 lamp	Wall Switch	S	26	8,736	2	Relamp	No	13	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	18	8,736	0.1	957	0	\$92	\$448	\$26	4.6
P.C.C	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	4	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.1	1,245	0	\$120	\$146	\$40	0.9
P.C.C	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
P.C.C	2	Compact Fluorescent: Pin-based 2 lamps	Wall Switch	S	72	8,736	2	Relamp	No	2	LED Screw-In Lamps: Pin based - 2 lamps	Wall Switch	50	8,736	0.0	408	0	\$39	\$109	\$0	2.8
ED waiting	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
ED waiting	4	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	26	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	18	8,736	0.0	294	0	\$28	\$138	\$8	4.6
ED waiting	3	Incandescent: Screw-in 1 lamp	Wall Switch	S	100	8,736	2	Relamp	No	3	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	15	8,736	0.3	2,406	-1	\$231	\$106	\$3	0.4
Outpatient	20	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	20	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Outpatient lobby	16	Metal Halide: (1) 100W Lamp	Wall Switch	S	128	8,736	1	Fixture Replacement	No	16	LED - Fixtures: Low-Bay	Wall Switch	38	8,736	1.5	13,526	-3	\$1,301	\$10,008	\$2,400	5.8
Outpatient check in	9	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	26	8,736	2	Relamp	No	9	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	18	8,736	0.1	662	0	\$64	\$310	\$18	4.6
Outpatient waiting	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Outpatient waiting	8	Incandescent: Screw-in 1 lamp	Wall Switch	S	60	8,736	2	Relamp	No	8	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.4	3,849	-1	\$370	\$138	\$8	0.4
Outpatient waiting	12	Linear Fluorescent - T5: 2' T5 (14W) - 1L	Wall Switch	S	18	8,736	2	Relamp	No	12	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.1	849	0	\$82	\$219	\$60	1.9
Radiology common	36	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	36	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Women's Center	20	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	26	8,736	2	Relamp	No	20	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	18	8,736	0.2	1,472	0	\$142	\$689	\$40	4.6
Women's Center	19	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	19	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Women's Center	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Dr office	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	351	0	\$34	\$116	\$20	2.8
Storage	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	2	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	175	0	\$17	\$116	\$0	6.9

Existing Conditions							Proposed Conditions							Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
MRI	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
MRI	4	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.1	521	0	\$50	\$138	\$8	2.6
MRI control room	9	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	26	8,736	2	Relamp	No	9	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	18	8,736	0.1	662	0	\$64	\$310	\$18	4.6
CT room 1	10	Compact Fluorescent: Screw-in 1 lamp	Wall Switch	S	36	8,736	2	Relamp	No	10	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	25	8,736	0.1	1,019	0	\$98	\$272	\$10	2.7
CT room 1	8	Linear Fluorescent - T5; 3' T5 (21W) - 1L	Wall Switch	S	27	8,736	2	Relamp	No	8	LED - Linear Tubes: (1) 3' Lamp	Wall Switch	11	8,736	0.1	1,245	0	\$120	\$146	\$40	0.9
MRI machine	14	Incandescent: Screw-in 1 lamp	Wall Switch	S	100	8,736	2	Relamp	No	14	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	15	8,736	1.3	11,228	-2	\$1,080	\$493	\$14	0.4
X-ray room	24	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	24	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.4	3,125	-1	\$301	\$827	\$48	2.6
Restroom	8	Compact Fluorescent: Screw-in 2 lamps	Occupancy Sensor	S	46	6,028	2	Relamp	No	8	LED Screw-In Lamps: Screw-in 2 lamps	Occupancy Sensor	32	6,028	0.1	719	0	\$69	\$276	\$16	3.8
Dressing room	1	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.0	130	0	\$13	\$34	\$2	2.6
Output hall	12	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	12	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.2	1,562	0	\$150	\$413	\$24	2.6
CT room 2	8	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	8	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
CT room 2	4	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	4	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.1	521	0	\$50	\$138	\$8	2.6
Ultra sound	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Ultra sound	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Ultra sound	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	3	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Ultra sound room1	2	Linear Fluorescent - T8; 4' T8 (32W) - 1L	Wall Switch	S	32	8,736	2	Relamp	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	8,736	0.0	330	0	\$32	\$37	\$10	0.8
Ultra sound room1	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Inpatient holding	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Control room 3	9	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	9	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.1	1,172	0	\$113	\$310	\$18	2.6
Fluoroscope room	6	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	46	8,736	2	Relamp	No	6	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	32	8,736	0.1	781	0	\$75	\$207	\$12	2.6
Fluoroscope room	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	1	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Fluoroscope room	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
ED Break room	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	965	0	\$93	\$270	\$35	2.5
Respiratory hall	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Respiratory therapy	13	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	13	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0

		Existing Conditions						Proposed Conditions						Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Respiratory therapy	2	Linear Fluorescent - T8: 2' T8 (17W) - 2L	Wall Switch	S	33	8,736	2	Relamp	No	2	LED - Linear Tubes: (2) 2' Lamps	Wall Switch	17	8,736	0.0	302	0	\$29	\$65	\$12	1.8
Risk Management hall	10	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	10	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Risk Management hall	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	11	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Risk Management hall	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
EEG	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
P.T	37	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	37	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
P.T	29	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	29	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Lab	8	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	8	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Lab	59	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	59	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Lab offices	42	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	42	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Histology	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Pathology	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Lab hall	11	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	11	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Lab hall	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	4	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen Storage	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736	3	None	Yes	4	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	6,028	0.1	468	0	\$45	\$200	\$0	4.4
Kitchen Storage	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	5	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.0	439	0	\$42	\$200	\$0	4.7
Kitchen	19	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	19	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen	24	U-Bend Fluorescent - T8: U T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	24	LED - Linear Tubes: (2) U-Lamp	Wall Switch	33	8,736	0.7	6,567	-1	\$632	\$1,739	\$240	2.4
Kitchen hood	5	Incandescent: Screw-in 1 lamp	Wall Switch	S	75	8,736	2	Relamp	No	5	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	11	8,736	0.3	3,007	-1	\$289	\$86	\$5	0.3
Café	65	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	4	None	Yes	65	LED - Fixtures: Ambient - 2' - Indirect Fixture	Daylight Dimming	30	5,242	0.8	7,359	-2	\$708	\$1,200	\$0	1.7
Café	14	Compact Fluorescent: Pin based 2 Lamp	Wall Switch	S	72	8,736	2, 3	Relamp	Yes	14	LED Screw-In Lamps: Screw-in 2 lamps	Occupancy Sensor	50	6,028	0.6	4,917	-1	\$473	\$752	\$63	1.5
Café	3	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2, 4	Relamp	Yes	3	LED - Linear Tubes: (2) 4' Lamps	Daylight Dimming	29	5,242	0.1	1,262	0	\$121	\$310	\$30	2.3
Café	12	LED - Fixtures: Ambient 2x4 Fixture	Wall Switch	S	40	8,736	4	None	Yes	12	LED - Fixtures: Ambient 2x4 Fixture	Daylight Dimming	40	5,242	0.2	1,811	0	\$174	\$800	\$0	4.6
Exterior: Carpert	15	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	Photocell	S	100	4,380		None	No	15	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	Photocell	100	4,380	0.0	0	0	\$0	\$0	\$0	0.0
Exterior: Carpert	87	Metal Halide: (1) 250W Lamp	Photocell	S	295	4,380	1	Fixture Replacement	No	87	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	Photocell	89	4,380	14.4	78,689	0	\$7,721	\$84,039	\$8,700	9.8

		Existing Conditions						Proposed Conditions						Energy Impact & Financial Analysis							
Location	Fixture Quantity	Fixture Description	Control System	Light Level	Watts per Fixture	Annual Operating Hours	ECM #	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Exterior Wallpack	34	Metal Halide: (1) 175W Lamp	Photocell	S	215	4,380	1	Fixture Replacement	No	34	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	Photocell	65	4,380	4.1	22,412	0	\$2,199	\$32,843	\$3,400	13.4
Exterior signs	4	Linear Fluorescent - T8: 4' T8 (32W) - 6L	Photocell	S	176	4,380	2	Relamp	No	4	LED - Linear Tubes: (6) 4' Lamps	Photocell	87	4,380	0.3	1,559	0	\$153	\$438	\$120	2.1
Recessed	9	Metal Halide: (1) 100W Lamp	Photocell	S	128	4,380	1	Fixture Replacement	No	9	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	Photocell	38	4,380	0.6	3,532	0	\$347	\$8,694	\$900	22.5
Bollards	8	Metal Halide: (1) 70W Lamp	Photocell	S	95	4,380	1	Fixture Replacement	No	8	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	Photocell	29	4,380	0.4	2,330	0	\$229	\$7,728	\$800	30.3
Admin ground	7	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	S	40	8,736		None	No	7	LED - Fixtures: Ambient - 4' - Indirect Fixture	Wall Switch	40	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Conference room B	6	LED - Fixtures: Ceiling Mount	Wall Switch	S	15	8,736	3	None	Yes	6	LED - Fixtures: Ceiling Mount	Occupancy Sensor	15	6,028	0.0	263	0	\$25	\$270	\$35	9.3
Conference room B	24	LED Screw-In Lamps: LED Spot fixture - 1 lamp	Wall Switch	S	10	8,736	3	None	Yes	24	LED Screw-In Lamps: LED Spot fixture - 1 lamp	Occupancy Sensor	10	6,028	0.1	702	0	\$68	\$540	\$70	7.0
Hallway	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
Closet	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	S	62	8,736	2	Relamp	No	1	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	8,736	0.0	311	0	\$30	\$37	\$10	0.9
Hallway	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Restroom	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	S	40	6,028	3	None	Yes	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	4,159	0.0	242	0	\$23	\$270	\$35	10.1
Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Occupancy Sensor	S	62	6,028	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	4,159	0.0	273	0	\$26	\$307	\$45	9.9
Restroom	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	S	40	6,028	3	None	Yes	3	LED - Fixtures: Ambient - 4' - Indirect Fixture	Occupancy Sensor	40	4,159	0.0	242	0	\$23	\$270	\$35	10.1
Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Occupancy Sensor	S	62	6,028	2, 3	Relamp	Yes	1	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	4,159	0.0	273	0	\$26	\$307	\$45	9.9
Restroom	5	Compact Fluorescent: Screw-in 1 lamp	Wall Switch	S	13	8,736	2, 3	Relamp	Yes	5	LED Screw-In Lamps: Screw-in 1 lamp	Occupancy Sensor	9	6,028	0.0	317	0	\$31	\$252	\$5	8.1
Admin	27	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	26	8,736	2, 3	Relamp	Yes	27	LED Screw-In Lamps: Screw-in 2 lamps	Occupancy Sensor	18	6,028	0.4	3,424	-1	\$329	\$1,470	\$124	4.1
Admin	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	18	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.2	1,579	0	\$152	\$270	\$35	1.5
Admin	13	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	S	10	8,736		None	No	13	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Admin restroom	1	Compact Fluorescent: Screw-in 2 lamps	Wall Switch	S	26	8,736	2	Relamp	No	1	LED Screw-In Lamps: Screw-in 2 lamps	Wall Switch	18	8,736	0.0	74	0	\$7	\$34	\$2	4.6
Admin restroom	2	Linear Fluorescent - T8: 2' T8 (17W) - 1L	Wall Switch	S	22	8,736	2, 3	Relamp	Yes	2	LED - Linear Tubes: (1) 2' Lamp	Occupancy Sensor	9	6,028	0.0	304	0	\$29	\$303	\$41	8.9
Ramp	12	Incandescent: Screw-in 1 lamp	Wall Switch	S	60	8,736	2	Relamp	No	12	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	9	8,736	0.7	5,774	-1	\$556	\$207	\$12	0.4
Cardiac SVS	78	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736		None	No	78	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	30	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Cardiac SVS	3	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	S	10	8,736		None	No	3	LED Screw-In Lamps: Screw-in 1 lamp	Wall Switch	10	8,736	0.0	0	0	\$0	\$0	\$0	0.0
Gary office	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	6	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	526	0	\$51	\$270	\$35	4.6
Eng office	10	LED - Fixtures: Ambient - 2' - Indirect Fixture	Wall Switch	S	30	8,736	3	None	Yes	10	LED - Fixtures: Ambient - 2' - Indirect Fixture	Occupancy Sensor	30	6,028	0.1	877	0	\$84	\$270	\$35	2.8

Motor Inventory & Recommendations

Location	Area(s)/System(s) Served	Existing Conditions							Proposed Conditions					Energy Impact & Financial Analysis						
		Motor Quantity	Motor Application	HP Per Motor	Full Load Efficiency	VFD Control?	Remaining Useful Life	Annual Operating Hours	ECM #	Install High Efficiency Motors?	Full Load Efficiency	Install VFDs?	Number of VFDs	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Boiler room	Chiller	2	Chilled Water Pump	25.0	93.6%	Yes	W	2,034		No	93.6%	No		0.0	0	0	\$0	\$0	\$0	0.0
Boiler room	Chiller	2	Chilled Water Pump	30.0	92.4%	No	B	2,034	NR, 6	Yes	93.6%	Yes	2	11.4	37,792	0	\$3,708	\$23,822	\$3,600	5.5
Boiler room	Boiler	2	Heating Hot Water Pump	25.0	93.6%	No	W	4,380	NR, 7	Yes	93.6%	Yes	2	4.8	65,454	0	\$6,422	\$22,942	\$0	3.6
Boiler room	Boiler room	2	Condenser Water Pump	25.0	93.6%	No	W	2,034	NR, 6	Yes	93.6%	Yes	2	9.3	30,388	0	\$2,982	\$21,690	\$3,000	6.3
Boiler room	Boiler	2	Combustion Air Fan	7.5	88.5%	No	W	4,380	NR, 8	Yes	89.5%	Yes	2	4.5	21,186	0	\$2,079	\$9,320	\$2,325	3.4
Boiler room	Boiler	2	Boiler Feed Water Pump	2.0	86.5%	Yes	W	4,380		No	86.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
Grounds	Chiller	2	Cooling Tower Fan	40.0	94.1%	Yes	N	4,067		No	94.1%	No		0.0	0	0	\$0	\$0	\$0	0.0
AHU-1	Rooms 230, 330, Hallways and rooms	1	Supply Fan	15.0	89.5%	No	W	6,132	NR	Yes	92.4%	No		0.2	1,805	0	\$177	\$1,891	\$0	10.7
AHU-2	ICU	1	Supply Fan	20.0	91.7%	No	W	6,132	NR	Yes	93.0%	No		0.1	1,046	0	\$103	\$2,516	\$0	24.5
AHU-3	4E, common areas, MDS, rooms 1-3	1	Supply Fan	15.0	87.5%	No	B	6,132	NR	Yes	92.4%	No		0.4	3,119	0	\$306	\$1,891	\$0	6.2
AHU-4	MDS	1	Supply Fan	15.0	87.5%	No	B	6,132	NR	Yes	92.4%	No		0.4	3,119	0	\$306	\$1,891	\$0	6.2
AHU-5	3E and 3W common areas	1	Supply Fan	7.5	82.9%	No	B	6,132	NR	Yes	91.7%	No		0.4	2,979	0	\$292	\$1,154	\$0	3.9
AHU-6	Cardiac Cath	1	Supply Fan	7.5	88.5%	No	B	6,132	NR	Yes	91.7%	No		0.1	1,015	0	\$100	\$1,154	\$0	11.6
AHU-7	Special procedures	1	Supply Fan	5.0	84.0%	No	B	6,132	NR	Yes	89.5%	No		0.2	1,255	0	\$123	\$921	\$0	7.5
AHU-8	2nd Floor 2 East & 2 West common area	1	Supply Fan	7.5	85.5%	No	B	6,132	NR	Yes	91.7%	No		0.2	2,035	0	\$200	\$1,154	\$0	5.8
AHU-9	Old ER Nurse Sta ER TR 4, 5, 12, observation, isolation	1	Supply Fan	15.0	92.4%	No	B	6,132		No	92.4%	No		0.0	0	0	\$0	\$0	\$0	0.0
AHU-10	New ER, T1, T2, Recep, Lobby, Boold Lab, Cashier, Empl Health	1	Supply Fan	25.0	91.7%	No	B	6,132	NR	Yes	93.6%	No		0.2	1,899	0	\$186	\$3,468	\$0	18.6
AHU-11	Operating Room	1	Supply Fan	15.0	88.5%	No	B	6,132	NR, 5	Yes	92.4%	Yes	1	4.6	31,284	0	\$3,069	\$7,086	\$1,200	1.9
AHU-12	OR Supply Room	1	Supply Fan	2.0	88.5%	No	W	6,132		No	88.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
AHU-15	Operator Room	1	Supply Fan	0.5	60.0%	No	N	6,132	NR	Yes	78.2%	No		0.1	665	0	\$65	\$505	\$0	7.7

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AHU-17	HVAC, Central Sterile, Hallway	1	Supply Fan	15.0	91.7%	No	N	6,132	NR	Yes	92.4%	No		0.1	425	0	\$42	\$1,891	\$0	45.3
AHU-18	X-Ray, Waiting, Pediatrics	1	Supply Fan	20.0	91.7%	No	N	6,132	NR	Yes	93.0%	No		0.1	1,046	0	\$103	\$2,516	\$0	24.5
AHU-21	Medical Staff and Medical Records	1	Supply Fan	5.0	89.5%	No	N	6,132	NR, 5	Yes	89.5%	Yes	1	1.4	9,583	0	\$940	\$4,197	\$400	4.0
AHU-22	Medical Supply	1	Supply Fan	5.0	87.0%	No	B	6,132	NR, 5	Yes	89.5%	Yes	1	1.5	10,354	0	\$1,016	\$4,197	\$400	3.7
AHU-23	Pharmacy	1	Supply Fan	3.0	86.5%	No	B	6,132	NR, 5	Yes	89.5%	Yes	1	0.9	6,308	0	\$619	\$3,812	\$240	5.8
AHU-24	Enviornmental Services, Linen Room and Mail Room	1	Supply Fan	1.0	85.5%	No	B	6,132	NR, 5	Yes	85.5%	Yes	1	0.3	2,006	0	\$197	\$3,283	\$80	16.3
AHU-27	Kitchen	1	Supply Fan	20.0	93.0%	No	N	6,132	NR, 5	Yes	93.0%	Yes	1	5.7	36,891	0	\$3,620	\$8,850	\$1,600	2.0
AHU-28	Serving Line	1	Supply Fan	3.0	89.5%	No	B	6,132	NR, 5	Yes	89.5%	Yes	1	0.9	5,750	0	\$564	\$3,812	\$240	6.3
AHU-29	Lab, Lab Offices	1	Supply Fan	25.0	93.6%	No	B	6,132	NR, 5	Yes	93.6%	Yes	1	7.2	45,818	0	\$4,495	\$11,471	\$2,000	2.1
AHU-30	PT Treatment	1	Supply Fan	15.0	85.9%	No	B	6,132	NR, 5	Yes	92.4%	Yes	1	4.7	33,748	0	\$3,311	\$7,086	\$1,200	1.8
AHU-31	Cafeteria, Dining Area	1	Supply Fan	10.0	85.6%	No	B	6,132	NR, 5	Yes	91.7%	Yes	1	3.1	22,440	0	\$2,202	\$5,375	\$800	2.1
AHU-32	Conference rooms A & B, Admin Common Area	1	Supply Fan	10.0	89.5%	No	B	6,132	NR, 5	Yes	91.7%	Yes	1	3.0	19,994	0	\$1,962	\$5,375	\$800	2.3
AHU-33	Admin Offices (Ground Floor), Board Room, Lab Offices	1	Supply Fan	10.0	89.5%	No	B	6,132	NR, 5	Yes	91.7%	Yes	1	3.0	19,994	0	\$1,962	\$5,375	\$800	2.3
AHU-34	New ENDO Unit	1	Supply Fan	1.5	84.0%	No	W	6,132	NR	Yes	86.5%	No		0.0	177	0	\$17	\$748	\$0	43.0
AHU-35 / HV-1	PT Main Area	1	Supply Fan	7.5	85.5%	No	B	6,132	NR	Yes	91.7%	No		0.2	2,035	0	\$200	\$1,154	\$0	5.8
AHU-36	Ambulatory Imaging Pavillion 1st Floor	1	Supply Fan	25.0	93.6%	No	B	6,132		No	93.6%	No		0.0	0	0	\$0	\$0	\$0	0.0
AHU-37	Radiology	1	Supply Fan	20.0	91.7%	No	B	6,132	NR	Yes	93.0%	No		0.1	1,046	0	\$103	\$2,516	\$0	24.5
AHU-38	Basement, Plant Operations Offices, Cardiac Services	1	Supply Fan	20.0	83.1%	No	B	6,132	NR	Yes	93.0%	No		1.1	8,790	0	\$862	\$2,516	\$0	2.9
AHU-39	Cardiac Cath	1	Supply Fan	20.0	91.7%	Yes	B	6,132	NR	Yes	93.0%	No		0.1	1,046	0	\$103	\$2,516	\$0	24.5
AHU-1	Rooms 230, 330, Hallways and rooms	1	Return Fan	7.5	88.5%	No	W	6,132	NR	Yes	91.7%	No		0.1	1,015	0	\$100	\$1,154	\$0	11.6

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AHU-9	Old ER Nurse Sta ER TR 4, 5, 12, observation, isolation	1	Return Fan	1.5	86.5%	No	B	6,132		No	86.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
AHU-10	New ER, T1, T2, Recep, Lobby, Boold Lab, Cashier, Empl Health	1	Return Fan	10.0	89.5%	No	B	6,132	NR	Yes	91.7%	No		0.1	920	0	\$90	\$1,567	\$0	17.4
AHU-11	Operating Room	1	Return Fan	3.0	89.5%	No	B	6,132	NR, 5	Yes	89.5%	Yes	1	0.9	5,364	0	\$526	\$3,812	\$240	6.8
AHU-29	Lab, Lab Offices	1	Return Fan	1.5	86.5%	No	B	6,132	NR, 5	Yes	86.5%	Yes	1	0.4	2,682	0	\$263	\$3,380	\$120	12.4
AHU-30	PT Treatment	1	Return Fan	1.5	86.5%	No	B	6,132	NR, 5	Yes	86.5%	Yes	1	0.4	2,682	0	\$263	\$3,380	\$120	12.4
AHU-36	Ambulatory Imaging Pavillion 1st Floor	1	Return Fan	5.0	89.5%	No	B	6,132		No	89.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
AHU-37	Radiology	1	Return Fan	5.0	87.5%	No	B	6,132	NR	Yes	89.5%	No		0.1	438	0	\$43	\$921	\$0	21.4
AHU-38	Basement, Plant Operations Offices, Cardiac Services	1	Return Fan	7.5	81.5%	No	B	6,132	NR	Yes	91.7%	No		0.4	3,512	0	\$345	\$1,154	\$0	3.3
AHU-39	Cardiac Cath	1	Return Fan	7.5	89.5%	Yes	B	6,132	NR	Yes	91.7%	No		0.1	690	0	\$68	\$1,154	\$0	17.0
Dock Chemical Room	Dock Chemical Room	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	344	0	\$34	\$456	\$0	13.5
IV Room	IV Room	1	Exhaust Fan	0.3	59.5%	No	B	6,132	NR	Yes	73.4%	No		0.0	360	0	\$35	\$456	\$0	12.9
Chemo Hood	Chemo Hood	1	Exhaust Fan	0.2	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Boiler Room	Boiler Room	1	Exhaust Fan	2.0	86.5%	No	B	6,132	NR	Yes	86.5%	No		0.0	0	0	\$0	\$894	\$0	0.0
Boiler Room	Boiler Room	1	Exhaust Fan	2.0	86.5%	No	B	6,132	NR	Yes	86.5%	No		0.0	0	0	\$0	\$894	\$0	0.0
Boiler Room	Boiler Room	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
EER 1	EER 1	1	Exhaust Fan	0.1	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Morgue	Morgue	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
PBX Closet	PBX Closet	1	Exhaust Fan	0.2	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Morgue Restroom	Morgue Restroom	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
MER 1	MER 1	1	Exhaust Fan	3.0	89.5%	No	B	6,132		No	89.5%	No		0.0	0	0	\$0	\$0	\$0	0.0

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MER 1	MER 1	1	Exhaust Fan	3.0	89.5%	No	B	6,132		No	89.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
O.R.	O.R.	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	344	0	\$34	\$456	\$0	13.5
O. R. Storage	O. R. Storage	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
O.R.	O.R.	1	Exhaust Fan	0.3	59.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	220	0	\$22	\$443	\$0	20.5
O.R.	O.R.	1	Exhaust Fan	0.3	52.0%	No	B	6,132	NR	Yes	69.5%	No		0.1	415	0	\$41	\$443	\$0	10.9
Central Sterile	Central Sterile	1	Exhaust Fan	0.5	60.0%	No	B	6,132	NR	Yes	78.2%	No		0.1	665	0	\$65	\$505	\$0	7.7
Central Sterile	Central Sterile	1	Exhaust Fan	1.0	82.5%	No	B	6,132	NR	Yes	85.5%	No		0.0	146	0	\$14	\$747	\$0	52.2
Central Sterile	Central Sterile	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
Central Sterile	Central Sterile	1	Exhaust Fan	0.2	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Central Sterile	Central Sterile	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4
Central Sterile	Central Sterile	1	Exhaust Fan	0.5	60.0%	No	B	6,132	NR	Yes	78.2%	No		0.1	665	0	\$65	\$505	\$0	7.7
Central Sterile	Central Sterile	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
Endo Room C	Endo Room C	1	Exhaust Fan	0.3	56.9%	No	B	6,132	NR	Yes	73.4%	No		0.1	452	0	\$44	\$456	\$0	10.3
E. D.	E. D.	1	Exhaust Fan	0.8	68.3%	No	B	6,132	NR	Yes	81.1%	No		0.1	595	0	\$58	\$536	\$0	9.2
E. D.	E. D.	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
P.T.	P.T.	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4
P. T.	P. T.	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
CT Inpatient	CT Inpatient	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
Imaging Pavillion	Imaging Pavillion	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
Imaging Pavillion	Imaging Pavillion	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9

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Imaging Pavillion	Imaging Pavillion	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	195	0	\$19	\$443	\$0	23.1
Infusion	Infusion	1	Exhaust Fan	1.5	86.5%	No	B	6,132		No	86.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
East Restrooms	East Restrooms	1	Exhaust Fan	3.0	85.5%	No	B	6,132	NR	Yes	89.5%	No		0.1	538	0	\$53	\$805	\$0	15.2
Neg. Pressure 332-432	Neg. Pressure 332-432	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
West Restrooms	West Restrooms	1	Exhaust Fan	2.0	84.5%	No	B	6,132	NR	Yes	86.5%	No		0.0	188	0	\$18	\$894	\$0	48.5
West Restrooms	West Restrooms	1	Exhaust Fan	1.0	82.5%	No	B	6,132	NR	Yes	85.5%	No		0.0	146	0	\$14	\$747	\$0	52.2
Neg. Pressure 412	Neg. Pressure 412	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
Kitchen	Kitchen	1	Exhaust Fan	7.5	91.0%	No	B	6,132	NR, 9	Yes	91.7%	Yes	1	2.3	13,604	0	\$1,335	\$4,761	\$1,500	2.4
Kitchen	Kitchen	1	Exhaust Fan	0.5	60.0%	No	B	6,132	NR	Yes	78.2%	No		0.1	665	0	\$65	\$505	\$0	7.7
Neg Pressure 230-330	Neg Pressure 230-330	1	Exhaust Fan	0.8	81.1%	No	B	6,132		No	81.1%	No		0.0	0	0	\$0	\$0	\$0	0.0
ICU Storage	ICU Storage	1	Exhaust Fan	0.1	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
ICU	ICU	1	Exhaust Fan	1.0	74.0%	No	B	6,132	NR	Yes	85.5%	No		0.1	624	0	\$61	\$747	\$0	12.2
ICU	ICU	1	Exhaust Fan	0.8	60.0%	No	B	6,132	NR	Yes	81.1%	No		0.1	1,116	0	\$109	\$536	\$0	4.9
Neg Pressure ICU 8	Neg Pressure ICU 8	1	Exhaust Fan	0.1	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Lab	Lab	1	Exhaust Fan	0.8	65.9%	No	B	6,132	NR	Yes	81.1%	No		0.1	732	0	\$72	\$536	\$0	7.5
Lab	Lab	1	Exhaust Fan	0.3	52.0%	No	B	6,132	NR	Yes	69.5%	No		0.1	415	0	\$41	\$443	\$0	10.9
Lab	Lab	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4
Lab	Lab	1	Exhaust Fan	0.5	60.0%	No	B	6,132	NR	Yes	78.2%	No		0.1	665	0	\$65	\$505	\$0	7.7
IT	IT	1	Exhaust Fan	0.2	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Neg Pressure ED 3	Neg Pressure ED 3	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4

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IT	IT	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4
IT	IT	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4
IT	IT	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	73.4%	No		0.0	348	0	\$34	\$456	\$0	13.4
2 West Restrooms	2 West Restrooms	1	Exhaust Fan	0.3	54.3%	No	B	6,132	NR	Yes	73.4%	No		0.1	548	0	\$54	\$456	\$0	8.5
MER 11	MER 11	1	Exhaust Fan	0.2	60.0%	No	B	6,132		No	60.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Cat #3 Gen Room	Cat #3 Gen Room	1	Exhaust Fan	0.5	60.0%	No	B	6,132	NR	Yes	78.2%	No		0.1	665	0	\$65	\$505	\$0	7.7
Main Elevator Room	Main Elevator Room	1	Exhaust Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.0	234	0	\$23	\$443	\$0	19.2
1st floor	1st floor	15	Supply Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.4	2,931	0	\$288	\$6,638	\$0	23.1
2nd floor	2nd floor	64	Supply Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		1.5	12,506	0	\$1,227	\$28,323	\$0	23.1
3rd floor	3rd floor	32	Supply Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.8	6,253	0	\$613	\$14,162	\$0	23.1
4th floor	4th floor	26	Supply Fan	0.3	60.0%	No	B	6,132	NR	Yes	69.5%	No		0.6	5,080	0	\$498	\$11,506	\$0	23.1
MER 7	Chiller	2	Chilled Water Pump	5.0	89.5%	No	B	2,745	NR, 6	Yes	89.5%	Yes	2	1.9	8,580	0	\$842	\$8,394	\$0	10.0
MER 11	Roof	2	Chilled Water Pump	3.0	89.5%	No	B	2,745	NR, 6	Yes	89.5%	Yes	2	1.1	5,148	0	\$505	\$7,625	\$0	15.1
MER 11	Roof	2	Chilled Water Pump	15.0	93.0%	No	B	3,391	NR, 6	Yes	93.0%	Yes	2	5.6	30,601	0	\$3,002	\$14,172	\$0	4.7
MER 14	Ground floor	2	Heating Hot Water Pump	3.0	89.5%	No	B	2,745	NR, 7	Yes	89.5%	Yes	2	0.6	5,148	0	\$505	\$7,625	\$0	15.1
MER 14	Ground floor	2	Chilled Water Pump	7.5	88.0%	No	B	3,391	NR, 6	Yes	91.7%	Yes	2	3.0	17,344	0	\$1,702	\$9,521	\$0	5.6
Mech room	MER 8	2	Supply Fan	10.0	91.7%	No	B	6,132		No	91.7%	No		0.0	0	0	\$0	\$0	\$0	0.0
Mech room	MER 8	2	Supply Fan	5.0	89.5%	No	B	6,132		No	89.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
Mech room	AHU 30	1	Heating Hot Water Pump	0.5	60.0%	No	B	2,745	NR	Yes	78.2%	No		0.1	298	0	\$29	\$505	\$0	17.3
Mech room	AHU 30	2	Heating Hot Water Pump	0.5	60.0%	No	B	2,745	NR	Yes	78.2%	No		0.2	596	0	\$58	\$1,010	\$0	17.3

		Existing Conditions							Proposed Conditions					Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor	Full Load Efficiency	VFD Control?	Remaining Useful Life	Annual Operating Hours	ECM #	Install High Efficiency Motors?	Full Load Efficiency	Install VFDs?	Number of VFDs	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Mech room	P4	1	Heating Hot Water Pump	5.0	89.5%	No	B	2,745	NR, 7	Yes	89.5%	Yes	1	0.5	4,290	0	\$421	\$4,197	\$0	10.0
Mech room	P5	1	Heating Hot Water Pump	5.0	89.5%	No	B	2,745	NR, 7	Yes	89.5%	Yes	1	0.5	4,290	0	\$421	\$4,197	\$0	10.0
Mech room	P6	1	Heating Hot Water Pump	3.0	89.5%	No	B	2,745	NR, 7	Yes	89.5%	Yes	1	0.3	2,574	0	\$253	\$3,812	\$0	15.1
Mech room	Chiller	2	Condenser Water Pump	0.8	70.0%	No	B	2,745	NR	Yes	81.1%	No		0.1	450	0	\$44	\$1,073	\$0	24.3
MER 5	MER 5	1	Supply Fan	5.0	89.5%	No	B	2,745		No	89.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
Roof	Chiller	1	Cooling Tower Fan	25.0	89.0%	No	B	4,067	NR, 5	Yes	93.6%	Yes	1	-0.1	10,077	0	\$989	\$11,471	\$2,000	9.6
MER 8	P3	1	Chilled Water Pump	25.0	89.0%	No	B	4,067	NR, 6	Yes	93.6%	Yes	1	5.1	34,786	0	\$3,413	\$11,471	\$1,500	2.9
MER 8	P-15, P-16	2	Chilled Water Pump	10.0	89.0%	No	B	3,391	NR, 6	Yes	91.7%	Yes	2	3.9	22,447	0	\$2,202	\$10,750	\$0	4.9
MER 8	P17	1	Chilled Water Pump	20.0	89.0%	No	B	3,391	NR, 6	Yes	93.0%	Yes	1	4.1	22,968	0	\$2,253	\$8,850	\$1,200	3.4
MER 8	P1	1	Chilled Water Pump	20.0	89.0%	No	B	3,391	NR, 6	Yes	93.0%	Yes	1	4.1	22,968	0	\$2,253	\$8,850	\$1,200	3.4
Boiler Room	DHW	2	Water Supply Pump	5.0	89.5%	No	B	2,745		No	89.5%	No		0.0	0	0	\$0	\$0	\$0	0.0
M.E.R. 8	Air Compressor 1	2	Air Compressor	5.0	84.0%	No	W	3,504		No	84.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
M.E.R. 8	Air Compressor 2	2	Air Compressor	10.0	91.7%	No	W	3,504		No	91.7%	No		0.0	0	0	\$0	\$0	\$0	0.0
Boiler Room	Air Compressor 3	1	Air Compressor	5.0	84.0%	No	W	3,504		No	84.0%	No		0.0	0	0	\$0	\$0	\$0	0.0
Boiler Room	Air Compressor 4	1	Air Compressor	5.0	84.0%	No	W	3,504		No	84.0%	No		0.0	0	0	\$0	\$0	\$0	0.0

Electric HVAC Inventory & Recommendations

Location	Area(s)/System(s) Served	Existing Conditions					Proposed Conditions								Energy Impact & Financial Analysis					
		System Quantity	System Type	Cooling Capacity per Unit (Tons)	Heating Capacity per Unit (MBh)	Remaining Useful Life	ECM #	Install High Efficiency System?	System Quantity	System Type	Cooling Capacity per Unit (Tons)	Heating Capacity per Unit (MBh)	Cooling Mode Efficiency (SEER/EER)	Heating Mode Efficiency (COP)	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives
Roof	Offices	1	Split-System Air-Source HP	3.50	45.00	N		No						0.0	0	0	\$0	\$0	\$0	0.0
Roof	AHU-39 (DX)	1	Split-System AC	51.60		N		No						0.0	0	0	\$0	\$0	\$0	0.0
Roof	Data center	2	Split-System AC	1.67		W		No						0.0	0	0	\$0	\$0	\$0	0.0

Electric Chiller Inventory & Recommendations

Location	Area(s)/System(s) Served	Existing Conditions				Proposed Conditions								Energy Impact & Financial Analysis						
		Chiller Quantity	System Type	Cooling Capacity per Unit (Tons)	Remaining Useful Life	ECM #	Install High Efficiency Chillers?	Chiller Quantity	System Type	Constant/Variable Speed	Cooling Capacity (Tons)	Full Load Efficiency (kW/Ton)	IPLV Efficiency (kW/Ton)	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Boiler Room	Chiller 1	1	Water-Cooled Screw Chiller	400.00	N		No							0.0	0	0	\$0	\$0	\$0	0.0
M.E.R. 8	Chiller 2	1	Water-Cooled Centrifugal Chiller	300.00	B	10	Yes	1	Water-Cooled Centrifugal Chiller	Variable	300.00	0.60	0.38	96.6	205,270	0	\$20,140	\$189,643	\$6,000	9.1
Ground/ outside M.E.R. 8	Chiller 3	1	Air-Cooled Screw Chiller	140.00	B	10	Yes	1	Air-Cooled Screw Chiller	Variable	140.00	1.24	0.74	75.2	159,882	0	\$15,687	\$137,862	\$12,600	8.0
Ground/ outside M.E.R. 8	Chiller 4	1	Air-Cooled Screw Chiller	125.00	B	10	Yes	1	Air-Cooled Screw Chiller	Variable	125.00	1.24	0.74	67.2	142,752	0	\$14,006	\$123,091	\$11,250	8.0
Roof	Chiller 5	1	Air-Cooled Screw Chiller	125.00	B	10	Yes	1	Air-Cooled Screw Chiller	Variable	125.00	1.24	0.74	67.2	142,752	0	\$14,006	\$123,091	\$11,250	8.0

Fuel Heating Inventory & Recommendations

Location	Area(s)/System(s) Served	Existing Conditions				Proposed Conditions							Energy Impact & Financial Analysis						
		System Quantity	System Type	Output Capacity per Unit (MBh)	Remaining Useful Life	ECM #	Install High Efficiency System?	System Quantity	System Type	Output Capacity per Unit (MBh)	Heating Efficiency	Heating Efficiency Units	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Boiler Room	Boiler 1 (space heating)	1	Forced Draft Steam Boiler	8,625.00	B	11	Yes	1	Forced Draft Steam Boiler	8,625.00	83.00%	Et	0.0	0	1,113	\$9,901	\$147,792	\$0	14.9
Boiler Room	Boiler 2 (space heating)	1	Forced Draft Steam Boiler	8,625.00	B	11	Yes	1	Forced Draft Steam Boiler	8,625.00	83.00%	Et	0.0	0	1,113	\$9,901	\$147,792	\$0	14.9

Demand Control Ventilation Recommendations

Location	Area(s)/System(s) Affected	Recommendation Inputs					Energy Impact & Financial Analysis						
		ECM #	Number of Zones	Cooling Capacity of Controlled System (Tons)	Electric Heating Capacity of Controlled System (kBtu/hr)	Output Heating Capacity of Controlled System (MBh)	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
AHU 11	Operating room	12	9.00	125.00	0.00	1,220.72	0.0	13,759	263	\$3,694	\$12,235	\$0	3.3
AHU 30	Physical Therapy	12	10.00	400.00	0.00	1,220.72	0.0	22,157	263	\$4,518	\$13,594	\$0	3.0
AHU 31	Cafeteria	12	10.00	400.00	0.00	1,220.72	0.0	22,157	263	\$4,518	\$13,594	\$0	3.0

DHW Inventory & Recommendations

Location	Area(s)/System(s) Served	Existing Conditions			Proposed Conditions							Energy Impact & Financial Analysis						
		System Quantity	System Type	Remaining Useful Life	ECM #	Replace?	System Quantity	System Type	Fuel Type	System Efficiency	Efficiency Units	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Boiler Room	All	1	Indirect System	W		No						0.0	0	0	\$0	\$0	\$0	0.0

Walk-In Cooler/Freezer Inventory & Recommendations

Location	Existing Conditions		Proposed Conditions				Energy Impact & Financial Analysis						
	Cooler/Freezer Quantity	Case Type/Temperature	ECM #	Install EC Evaporator Fan Motors?	Install Electric Defrost Control?	Install Evaporator Fan Control?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Kitchen	1	Medium Temp Freezer (0F to 30F)		No	No	No	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen	1	Cooler (35F to 55F)	13	Yes	No	No	0.5	4,401	0	\$432	\$607	\$0	1.4
Kitchen	1	Cooler (35F to 55F)	13	Yes	No	No	0.6	4,965	0	\$487	\$1,213	\$0	2.5

Commercial Refrigerator/Freezer Inventory & Recommendations

Location	Existing Conditions			Proposed Conditions		Energy Impact & Financial Analysis						
	Quantity	Refrigerator/ Freezer Type	ENERGY STAR Qualified?	ECM #	Install ENERGY STAR Equipment?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Café	4	Stand-Up Refrigerator, Solid Door (31 - 50 cu. ft.)	Yes		No	0.0	0	0	\$0	\$0	\$0	0.0

Cooking Equipment Inventory & Recommendations

Location	Existing Conditions			Proposed Conditions		Energy Impact & Financial Analysis						
	Quantity	Equipment Type	High Efficiency Equipment?	ECM #	Install High Efficiency Equipment?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Kitchen	2	Gas Griddle (5 Feet Width)	Yes		No	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen	2	Insulated Food Holding Cabinet (Full Size)	Yes		No	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen	1	Electric Combination Oven/Steam Cooker (>28 Pans)	Yes		No	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen	1	Electric Fryer	Yes		No	0.0	0	0	\$0	\$0	\$0	0.0
Kitchen	1	Electric Steamer	Yes		No	0.0	0	0	\$0	\$0	\$0	0.0

Dishwasher Inventory & Recommendations

Location	Existing Conditions					Proposed Conditions		Energy Impact & Financial Analysis						
	Quantity	Dishwasher Type	Water Heater Fuel Type	Booster Heater Fuel Type	ENERGY STAR Qualified?	ECM #	Install ENERGY STAR Equipment?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Payback w/ Incentives in Years
Café	1	Single Tank Conveyor (High Temp)	Electric	N/A	No		No	0.0	0	0	\$0	\$0	\$0	0.0

Plug Load Inventory

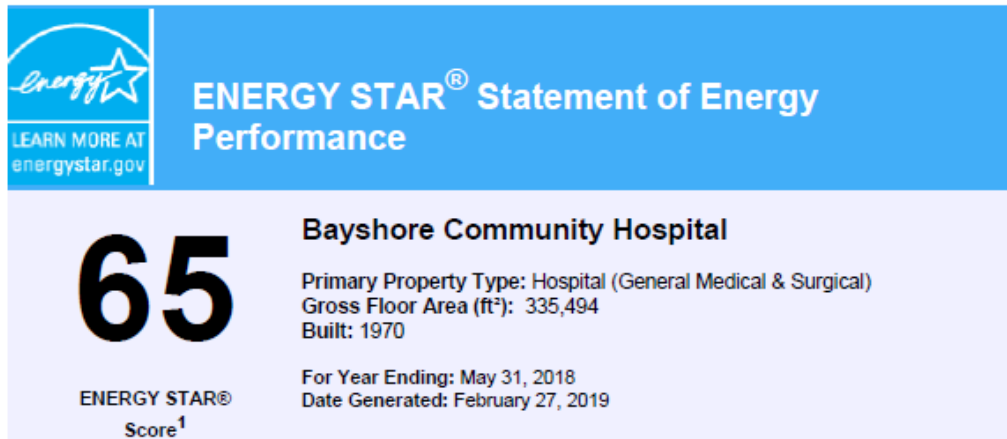
Existing Conditions				
Location	Quantity	Equipment Description	Energy Rate (W)	ENERGY STAR Qualified?
All areas	72	LED TV (40")	71.0	Yes
All areas	6	Mini Fridge	153.0	Yes
All areas	15	Coffee Maker	900.0	Yes
All areas	7	Icemaker	500.0	Yes
All areas	11	Microwave	1,000.0	Yes
All areas	15	Fridge	172.0	Yes
All areas	4	LED TV (46")	100.0	Yes
All areas	14	Printer (small)	20.0	Yes
All areas	15	Printer (med)	60.0	Yes
All areas	12	Printer (large)	80.0	Yes
All areas	100	Miscellaneous Equipment	3,000.0	No

Vending Machine Inventory & Recommendations

Location	Existing Conditions		Proposed Conditions		Energy Impact & Financial Analysis						
	Quantity	Vending Machine Type	ECM #	Install Controls?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Café/Kitchen/Common Areas	8	Refrigerated	14	Yes	1.5	12,895	0	\$1,265	\$1,840	\$400	1.1

APPENDIX B: ENERGY STAR® STATEMENT OF ENERGY PERFORMANCE

EUI is presented in terms of *site energy* and *source energy*. Site energy is the amount of fuel and electricity consumed by a building as reflected in utility bills. Source energy includes fuel consumed to generate electricity consumed at the site, factoring in electric production and distribution losses for the region.



ENERGY STAR® Statement of Energy Performance

65
ENERGY STAR® Score¹

Bayshore Community Hospital
Primary Property Type: Hospital (General Medical & Surgical)
Gross Floor Area (ft²): 335,494
Built: 1970

For Year Ending: May 31, 2018
Date Generated: February 27, 2019

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	Property Owner	Primary Contact	
Bayshore Community Hospital 727 North Beers Street Holmdel, New Jersey 07733	_____	_____	
	() - _____	() - _____	
Property ID: 6885530			
Energy Consumption and Energy Use Intensity (EUI)			
Site EUI	Annual Energy by Fuel		National Median Comparison
237.7 kBtu/ft ²	Natural Gas (kBtu)	48,874,609 (81%)	National Median Site EUI (kBtu/ft ²)
	Electric - Grid (kBtu)	30,876,735 (39%)	National Median Source EUI (kBtu/ft ²)
			% Diff from National Median Source EUI
			-7%
Source EUI	Annual Emissions		
410.7 kBtu/ft ²	Greenhouse Gas Emissions (Metric Tons CO ₂ e/year)		5,724

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

() - _____



Professional Engineer Stamp
(if applicable)

APPENDIX C: GLOSSARY

TERM	DEFINITION
Blended Rate	Used to calculate fiscal savings associated with measures. The blended rate is calculated by dividing the amount of your bill by the total energy use. For example, if your bill is \$22,217.22, and you used 266,400 kilowatt-hours, your blended rate is 8.3 cents per kilowatt-hour.
Btu	<i>British thermal unit</i> : a unit of energy equal to the amount of heat required to increase the temperature of one pound of water by one-degree Fahrenheit.
CHP	<i>Combined heat and power</i> . Also referred to as cogeneration.
COP	<i>Coefficient of performance</i> : a measure of efficiency in terms of useful energy delivered divided by total energy input.
Demand Response	Demand response reduces or shifts electricity usage at or among participating buildings/sites during peak energy use periods in response to time-based rates or other forms of financial incentives.
DCV	<i>Demand control ventilation</i> : a control strategy to limit the amount of outside air introduced to the conditioned space based on actual occupancy need.
US DOE	<i>United States Department of Energy</i>
EC Motor	<i>Electronically commutated motor</i>
ECM	<i>Energy conservation measure</i>
EER	<i>Energy efficiency ratio</i> : a measure of efficiency in terms of cooling energy provided divided by electric input.
EUI	<i>Energy Use Intensity</i> : measures energy consumption per square foot and is a standard metric for comparing buildings' energy performance.
Energy Efficiency	Reducing the amount of energy necessary to provide comfort and service to a building/area. Achieved through the installation of new equipment and/or optimizing the operation of energy use systems. Unlike conservation, which involves some reduction of service, energy efficiency provides energy reductions without sacrifice of service.
ENERGY STAR®	ENERGY STAR® is the government-backed symbol for energy efficiency. The ENERGY STAR® program is managed by the EPA.
EPA	<i>United States Environmental Protection Agency</i>
Generation	The process of generating electric power from sources of primary energy (e.g., natural gas, the sun, oil).
GHG	<i>Greenhouse gas</i> : gases that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.
gpf	<i>Gallons per flush</i>

gpm	<i>Gallon per minute</i>
HID	<i>High intensity discharge: high-output lighting lamps such as high-pressure sodium, metal halide, and mercury vapor.</i>
hp	<i>Horsepower</i>
HPS	<i>High-pressure sodium: a type of HID lamp</i>
HSPF	<i>Heating seasonal performance factor: a measure of efficiency typically applied to heat pumps. Heating energy provided divided by seasonal energy input.</i>
HVAC	<i>Heating, ventilating, and air conditioning</i>
IHP 2014	<i>US DOE Integral Horsepower rule. The current ruling regarding required electric motor efficiency.</i>
IPLV	<i>Integrated part load value: a measure of the part load efficiency usually applied to chillers.</i>
kBtu	<i>One thousand British thermal units</i>
kW	<i>Kilowatt: equal to 1,000 Watts.</i>
kWh	<i>Kilowatt-hour: 1,000 Watts of power expended over one hour.</i>
LED	<i>Light emitting diode: a high-efficiency source of light with a long lamp life.</i>
LGEA	<i>Local Government Energy Audit</i>
Load	<i>The total power a building or system is using at any given time.</i>
Measure	<i>A single activity, or installation of a single type of equipment, that is implemented in a building system to reduce total energy consumption.</i>
MH	<i>Metal halide: a type of HID lamp</i>
MBh	<i>Thousand Btu per hour</i>
MBtu	<i>One thousand British thermal units</i>
MMBtu	<i>One million British thermal units</i>
MV	<i>Mercury Vapor: a type of HID lamp</i>
NJBPU	<i>New Jersey Board of Public Utilities</i>
NJCEP	<i>New Jersey's Clean Energy Program: NJCEP is a statewide program that offers financial incentives, programs and services for New Jersey residents, business owners and local governments to help them save energy, money and the environment.</i>
psig	<i>Pounds per square inch gauge</i>
Plug Load	<i>Refers to the amount of power used in a space by products that are powered by means of an ordinary AC plug.</i>
PV	<i>Photovoltaic: refers to an electronic device capable of converting incident light directly into electricity (direct current).</i>

SEER	<i>Seasonal energy efficiency ratio</i> : a measure of efficiency in terms of annual cooling energy provided divided by total electric input.
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SEP	<i>Statement of energy performance</i> : a summary document from the ENERGY STAR® Portfolio Manager®.
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Simple Payback	The amount of time needed to recoup the funds expended in an investment or to reach the break-even point between investment and savings.
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SREC	<i>Solar renewable energy credit</i> : a credit you can earn from the state for energy produced from a photovoltaic array.
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T5, T8, T12	A reference to a linear lamp diameter. The number represents increments of 1/8 th of an inch.
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Temperature Setpoint	The temperature at which a temperature regulating device (thermostat, for example) has been set.
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therm	100,000 Btu. Typically used as a measure of natural gas consumption.
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tons	A unit of cooling capacity equal to 12,000 Btu/hr.
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Turnkey	Provision of a complete product or service that is ready for immediate use
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VAV	<i>Variable air volume</i>
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VFD	<i>Variable frequency drive</i> : a controller used to vary the speed of an electric motor.
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WaterSense™	The symbol for water efficiency. The WaterSense™ program is managed by the EPA.
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Watt (W)	Unit of power commonly used to measure electricity use.
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