ENERGY SAVINGS IMPROVEMENT PROGRAM

WASHINGTON TOWNSHIP BOARD OF EDUCATION

ENERGY SAVINGS PLAN

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October 2013
Revised July 2015

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Appendices:

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I. Executive Summary

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

ENERGY CONSERVATION MEASURES – PARTIAL TABLE 1 OF 3		
ECM No.	SCHOOL / BUILDING	DESCRIPTION
ECM HS#1	HIGH SCHOOL	Replace 8 incandescent lamps with CFLs (9/10 Building)
ECM HS#2	HIGH SCHOOL	Replace 100 incandescent lamps with CFLs (11/12 Building)
ECM HS#3	HIGH SCHOOL	Replace 140 incandescent lamps with CFLs (Core Building)
ECM HS#4	HIGH SCHOOL	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)
ECM HS#5	HIGH SCHOOL	Install 127 new occupancy sensors (9/10 Building)
ECM HS#6	HIGH SCHOOL	Install 62 new LEDs in stairwells (9/10 Building)
ECM HS#7	HIGH SCHOOL	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)
ECM HS#8	HIGH SCHOOL	Install 100 new occupancy sensors (11/12 Building)
ECM HS#9	HIGH SCHOOL	Install 20 new LEDs in stairwells (Core Building)
ECM HS#10	HIGH SCHOOL	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)
ECM HS#11	HIGH SCHOOL	Install 49 new occupancy sensors (Core Building)
ECM HS#12	HIGH SCHOOL	Exterior Door Replacement
ECM BH#1	BUNKER HILL MIDDLE	Lighting Upgrade - Interior/Exterior
ECM BH#2	BUNKER HILL MIDDLE	Lighting Controls
ECM BH#3	BUNKER HILL MIDDLE	Vending Miser Controls
ECM BH#4	BUNKER HILL MIDDLE	Walk-in Controls
ECM BH#5	BUNKER HILL MIDDLE	High Efficiency XFMR
ECM BH#6	BUNKER HILL MIDDLE	Energy Recovery Replacement

ENERGY CONSERVATION MEASURES – PARTIAL TABLE 2 OF 3		
ECM No.	SCHOOL / BUILDING	DESCRIPTION
ECM CR#1	CHESTNUT RIDGE MIDDLE	Vending Miser Controls
ECM CR#2	CHESTNUT RIDGE MIDDLE	Walk-in Controls
ECM CR#3	CHESTNUT RIDGE MIDDLE	High Efficiency Transformers
ECM CR#4	CHESTNUT RIDGE MIDDLE	Domestic Boiler Upgrade
ECM CR#5	CHESTNUT RIDGE MIDDLE	Controls Optimization
ECM CR#6	CHESTNUT RIDGE MIDDLE	ECM Motor Exhaust Fans
ECM CR#7	CHESTNUT RIDGE MIDDLE	Exterior Door Replacement
ECM CR#8	CHESTNUT RIDGE MIDDLE	Lighting Upgrade - Interior/Exterior
ECM CR#9	CHESTNUT RIDGE MIDDLE	Lighting Controls
ECM OV#1	ORCHARD VALLEY MIDDLE	Vending Miser Controls
ECM OV#2	ORCHARD VALLEY MIDDLE	Washing Machine Replacement
ECM OV#3	ORCHARD VALLEY MIDDLE	Walk-in Controls
ECM OV#4	ORCHARD VALLEY MIDDLE	High Efficiency Transformers
ECM OV#5	ORCHARD VALLEY MIDDLE	Exterior Door Replacement
ECM OV#6	ORCHARD VALLEY MIDDLE	ECM Motor Exhaust Fans
ECM OV#7	ORCHARD VALLEY MIDDLE	Lighting Upgrade - Interior/Exterior
ECM OV#8	ORCHARD VALLEY MIDDLE	Lighting Controls
ECM BE#1	BELLS ELEMENTARY	Install 7 new CFL fixtures
ECM BE#2	BELLS ELEMENTARY	Install 19 new occupancy sensors
ECM BI#1	BIRCHES ELEMENTARY	Install 7 new CFL fixtures
ECM BI#2	BIRCHES ELEMENTARY	Replace 15 MH fixtures with LEDs
ECM BI#3	BIRCHES ELEMENTARY	Replace 1 old LED exit sign with newer LED exit sign
ECM BI#4	BIRCHES ELEMENTARY	Install 20 new occupancy sensors
ECM HU#1	HURFFVILLE ELEMENTARY	Replace 23 incandescent lamps with CFLs
ECM HU#2	HURFFVILLE ELEMENTARY	Replace 6 incandescent Exit signs with new LED Exit signs
ECM HU#3	HURFFVILLE ELEMENTARY	Replace 6 MH fixtures with LEDs
ECM HU#4	HURFFVILLE ELEMENTARY	Install 27 new occupancy sensors

ENERGY CONSERVATION MEASURES – PARTIAL TABLE 3 OF 3		
ECM No.	SCHOOL / BUILDING	DESCRIPTION
ECM TJ#1	THOMAS JEFFERSON ELEMENTARY	Lighting Upgrade - Interior/Exterior
ECM TJ#2	THOMAS JEFFERSON ELEMENTARY	Lighting Controls
ECM TJ#3	THOMAS JEFFERSON ELEMENTARY	Replace Gym, Café and Stage with RTU
ECM TJ#4	THOMAS JEFFERSON ELEMENTARY	High Efficiency Gas Domestic Boiler
ECM TJ#5	THOMAS JEFFERSON ELEMENTARY	High Efficiency XFMR
ECM TJ#6	THOMAS JEFFERSON ELEMENTARY	Walk-in Controls
ECM TJ#7	THOMAS JEFFERSON ELEMENTARY	Exterior Door Replacement
ECM WE#1	WEDGWOOD ELEMENTARY	Install 5 new CFL fixtures
ECM WE#2	WEDGWOOD ELEMENTARY	Replace existing high bay MH light fixtures with 15 LEDs
ECM WE#3	WEDGWOOD ELEMENTARY	Replace 19 LED exit signs with newer LED exit signs
ECM WE#4	WEDGWOOD ELEMENTARY	Install 26 occupancy sensors
ECM WH#1	WHITMAN ELEMENTARY	Replace 11 incandescent lamps with CFLs
ECM WH#2	WHITMAN ELEMENTARY	Replace 15 high bay MH fixtures with LEDs
ECM WH#3	WHITMAN ELEMENTARY	Replace 16 old LED exit signs with newer LED exit signs
ECM WH#4	WHITMAN ELEMENTARY	Install 10 occupancy sensors
ECM ECC#1	GRENLOCH ECC	Replace gas DHW heater in old school
ECM ECC#2	GRENLOCH ECC	Replace electric DHW heater in New School

The proposed ECM's yield the following results over a 15-year project life.

ECM YIELD OVER 15 YEARS				
NET PROJECT COST	ANNUAL UTILITY SAVINGS	NET PRESENT VALUE	PARTICIPANT NET BENEFIT	BENEFIT COST RATIO
$1,933,815	$175,469	$214,487	$214,487	1.18

ECM Summary tables on the following pages show the associated utility cost savings for each measure.

UTILITY COST SAVINGS – PARTIAL TABLE 1 OF 4					
ECM No.	SCHOOL / BUILDING	DESCRIPTION	ANNUAL UTILITY COST SAVINGS		
			ELECTRIC SAVINGS	NATURAL GAS SAVINGS	TOTAL SAVINGS
ECM HS#1	HIGH SCHOOL	Replace 8 incandescent lamps with CFLs (9/10 Building)	$72	$0	$72
ECM HS#2	HIGH SCHOOL	Replace 100 incandescent lamps with CFLs (11/12 Building)	$933	$0	$933
ECM HS#3	HIGH SCHOOL	Replace 140 incandescent lamps with CFLs (Core Building)	$1,776	$0	$1,776
ECM HS#4	HIGH SCHOOL	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)	$1,502	$0	$1,502
ECM HS#5	HIGH SCHOOL	Install 127 new occupancy sensors (9/10 Building)	$11,131	$0	$11,131
ECM HS#6	HIGH SCHOOL	Install 62 new LEDs in stairwells (9/10 Building)	$1,906	$0	$1,906
ECM HS#7	HIGH SCHOOL	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)	$1,221	$0	$1,221
ECM HS#8	HIGH SCHOOL	Install 100 new occupancy sensors (11/12 Building)	$8,339	$0	$8,339
ECM HS#9	HIGH SCHOOL	Install 20 new LEDs in stairwells (Core Building)	$450	$0	$450
ECM HS#10	HIGH SCHOOL	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)	$852	$0	$852
ECM HS#11	HIGH SCHOOL	Install 49 new occupancy sensors (Core Building)	$5,477	$0	$5,477
ECM HS#12	HIGH SCHOOL	Exterior Door Replacement	$0	$2,105	$2,105
ECM BH#1	BUNKER HILL MIDDLE	Lighting Upgrade - Interior/Exterior	$10,844	$0	$10,844
ECM BH#2	BUNKER HILL MIDDLE	Lighting Controls	$4,217	$0	$4,217
ECM BH#3	BUNKER HILL MIDDLE	Vending Miser Controls	$572	$0	$572
ECM BH#4	BUNKER HILL MIDDLE	Walk-in Controls	$362	$0	$362
ECM BH#5	BUNKER HILL MIDDLE	High Efficiency XFMR	$3,225	$0	$3,225
ECM BH#6	BUNKER HILL MIDDLE	Energy Recovery Replacement	$8,091	$4,570	$12,661

UTILITY COST SAVINGS – PARTIAL TABLE 2 OF 4					
ECM CR#1	CHESTNUT RIDGE MIDDLE	Vending Miser Controls	$1,249	$0	$1,249
ECM CR#2	CHESTNUT RIDGE MIDDLE	Walk-in Controls	$293	$0	$293
ECM CR#3	CHESTNUT RIDGE MIDDLE	High Efficiency Transformers	$11,029	$0	$11,029
ECM CR#4	CHESTNUT RIDGE MIDDLE	Domestic Boiler Upgrade	$0	$1,448	$1,448
ECM CR#5	CHESTNUT RIDGE MIDDLE	Controls Optimization	$3,095	$1,433	$4,528
ECM CR#6	CHESTNUT RIDGE MIDDLE	ECM Motor Exhaust Fans	$1,119	$0	$1,119
ECM CR#7	CHESTNUT RIDGE MIDDLE	Exterior Door Replacement	$0	$374	$374
ECM CR#8	CHESTNUT RIDGE MIDDLE	Lighting Upgrade - Interior/Exterior	$5,106	$0	$5,106
ECM CR#9	CHESTNUT RIDGE MIDDLE	Lighting Controls	$3,946	$0	$3,946
ECM OV#1	ORCHARD VALLEY MIDDLE	Vending Miser Controls	$1,036	$0	$1,036
ECM OV#2	ORCHARD VALLEY MIDDLE	Washing Machine Replacement	$0	$39	$39
ECM OV#3	ORCHARD VALLEY MIDDLE	Walk-in Controls	$318	$0	$318
ECM OV#4	ORCHARD VALLEY MIDDLE	High Efficiency Transformers	$7,895	$0	$7,895
ECM OV#5	ORCHARD VALLEY MIDDLE	Exterior Door Replacement	$0	$374	$374
ECM OV#6	ORCHARD VALLEY MIDDLE	ECM Motor Exhaust Fans	$1,276	$0	$1,276
ECM OV#7	ORCHARD VALLEY MIDDLE	Lighting Upgrade - Interior/Exterior	$6,656	$0	$6,656
ECM OV#8	ORCHARD VALLEY MIDDLE	Lighting Controls	$4,780	$0	$4,780

UTILITY COST SAVINGS – PARTIAL TABLE 3 OF 4					
ECM BE#1	BELLS ELEMENTARY	Install 7 new CFL fixtures	$172	$0	$172
ECM BE#2	BELLS ELEMENTARY	Install 19 new occupancy sensors	$541	$0	$541
ECM BI#1	BIRCHES ELEMENTARY	Install 7 new CFL fixtures	$154	$0	$154
ECM BI#2	BIRCHES ELEMENTARY	Replace 15 MH fixtures with LEDs	$668	$0	$668
ECM BI#3	BIRCHES ELEMENTARY	Replace 1 old LED exit sign with newer LED exit sign	$287	$0	$287
ECM BI#4	BIRCHES ELEMENTARY	Install 20 new occupancy sensors	$421	$0	$421
ECM HU#1	HURFFVILLE ELEMENTARY	Replace 23 incandescent lamps with CFLs	$421	$0	$421
ECM HU#2	HURFFVILLE ELEMENTARY	Replace 6 incandescent Exit signs with new LED Exit signs	$261	$0	$261
ECM HU#3	HURFFVILLE ELEMENTARY	Replace 6 MH fixtures with LEDs	$271	$0	$271
ECM HU#4	HURFFVILLE ELEMENTARY	Install 27 new occupancy sensors	$641	$0	$641
ECM TJ#1	THOMAS JEFFERSON ELEMENTARY	Lighting Upgrade - Interior/Exterior	$2,897	$0	$2,897
ECM TJ#2	THOMAS JEFFERSON ELEMENTARY	Lighting Controls	$2,617	$0	$2,617
ECM TJ#3	THOMAS JEFFERSON ELEMENTARY	Replace Gym, Café and Stage with RTU	$36,321	-$9,906	$26,415
ECM TJ#4	THOMAS JEFFERSON ELEMENTARY	High Efficiency Gas Domestic Boiler	$10,880	-$2,709	$8,171
ECM TJ#5	THOMAS JEFFERSON ELEMENTARY	High Efficiency XFMR	$7,093	$0	$7,093
ECM TJ#6	THOMAS JEFFERSON ELEMENTARY	Walk-in Controls	$281	$0	$281
ECM TJ#7	THOMAS JEFFERSON ELEMENTARY	Exterior Door Replacement	$907	$0	$907

UTILITY COST SAVINGS – PARTIAL TABLE 4 OF 4					
ECM WE#1	WEDGWOOD ELEMENTARY	Install 5 new CFL fixtures	$85	$0	$85
ECM WE#2	WEDGWOOD ELEMENTARY	Replace existing high bay MH light fixtures with 15 LEDs	$772	$0	$772
ECM WE#3	WEDGWOOD ELEMENTARY	Replace 19 LED exit signs with newer LED exit signs	$575	$0	$575
ECM WE#4	WEDGWOOD ELEMENTARY	Install 26 occupancy sensors	$504	$0	$504
ECM WH#1	WHITMAN ELEMENTARY	Replace 11 incandescent lamps with CFLs	$179	$0	$179
ECM WH#2	WHITMAN ELEMENTARY	Replace 15 high bay MH fixtures with LEDs	$831	$0	$831
ECM WH#3	WHITMAN ELEMENTARY	Replace 16 old LED exit signs with newer LED exit signs	$508	$0	$508
ECM WH#4	WHITMAN ELEMENTARY	Install 10 occupancy sensors	$587	$0	$587
ECM ECC#1	GRENLOCH ECC	Replace gas DHW heater in old school	$0	$22	$22
ECM ECC#2	GRENLOCH ECC	Replace electric DHW heater in New School	$80	$0	$80
TOTAL			$177,720	-$2,251	$175,469

ECM Summary tables on the following pages show the associated energy savings for each measure.

ENERGY CONSUMPTION SAVINGS – PARTIAL TABLE 1 OF 4					
ECM No.	SCHOOL / BUILDING	DESCRIPTION	ANNUAL UTILITY REDUCTION		
			ELECTRIC CONSUMPTION (kWh)	ELECTRIC DEMAND (kW)	NATURAL GAS (THERMS)
ECM HS#1	HIGH SCHOOL	Replace 8 incandescent lamps with CFLs (9/10 Building)	501	0.0	0
ECM HS#2	HIGH SCHOOL	Replace 100 incandescent lamps with CFLs (11/12 Building)	6,479	0.0	0
ECM HS#3	HIGH SCHOOL	Replace 140 incandescent lamps with CFLs (Core Building)	12,331	0.0	0
ECM HS#4	HIGH SCHOOL	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)	10,430	2.0	0
ECM HS#5	HIGH SCHOOL	Install 127 new occupancy sensors (9/10 Building)	77,297	0.0	0
ECM HS#6	HIGH SCHOOL	Install 62 new LEDs in stairwells (9/10 Building)	13,234	0.0	0
ECM HS#7	HIGH SCHOOL	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)	8,475	1.0	0
ECM HS#8	HIGH SCHOOL	Install 100 new occupancy sensors (11/12 Building)	57,908	0.0	0
ECM HS#9	HIGH SCHOOL	Install 20 new LEDs in stairwells (Core Building)	3,128	0.0	0
ECM HS#10	HIGH SCHOOL	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)	5,913	0.8	0
ECM HS#11	HIGH SCHOOL	Install 49 new occupancy sensors (Core Building)	38,038	0.0	0
ECM HS#12	HIGH SCHOOL	Exterior Door Replacement	0	0.0	2,266
ECM BH#1	BUNKER HILL MIDDLE	Lighting Upgrade - Interior/Exterior	75,801	20.0	0
ECM BH#2	BUNKER HILL MIDDLE	Lighting Controls	29,492	0.0	0
ECM BH#3	BUNKER HILL MIDDLE	Vending Miser Controls	3,997	0.0	0
ECM BH#4	BUNKER HILL MIDDLE	Walk-in Controls	2,534	0.0	0
ECM BH#5	BUNKER HILL MIDDLE	High Efficiency XFMR	22,542	4.2	0
ECM BH#6	BUNKER HILL MIDDLE	Energy Recovery Replacement	56,583	0.0	4,361

ENERGY CONSUMPTION SAVINGS – PARTIAL TABLE 2 OF 4					
ECM CR#1	CHESTNUT RIDGE MIDDLE	Vending Miser Controls	8,555	0.0	0
ECM CR#2	CHESTNUT RIDGE MIDDLE	Walk-in Controls	2,010	0.0	0
ECM CR#3	CHESTNUT RIDGE MIDDLE	High Efficiency Transformers	75,515	14.1	0
ECM CR#4	CHESTNUT RIDGE MIDDLE	Domestic Boiler Upgrade	0	0.0	1,371
ECM CR#5	CHESTNUT RIDGE MIDDLE	Controls Optimization	21,200	0.0	1,357
ECM CR#6	CHESTNUT RIDGE MIDDLE	ECM Motor Exhaust Fans	7,662	2.6	0
ECM CR#7	CHESTNUT RIDGE MIDDLE	Exterior Door Replacement	0	0.0	354
ECM CR#8	CHESTNUT RIDGE MIDDLE	Lighting Upgrade - Interior/Exterior	34,955	9.0	0
ECM CR#9	CHESTNUT RIDGE MIDDLE	Lighting Controls	27,026	0.0	0
ECM OV#1	ORCHARD VALLEY MIDDLE	Vending Miser Controls	6,557	0.0	0
ECM OV#2	ORCHARD VALLEY MIDDLE	Washing Machine Replacement	0	0.0	35
ECM OV#3	ORCHARD VALLEY MIDDLE	Walk-in Controls	2,010	0.0	0
ECM OV#4	ORCHARD VALLEY MIDDLE	High Efficiency Transformers	49,952	9.3	0
ECM OV#5	ORCHARD VALLEY MIDDLE	Exterior Door Replacement	6,476	0.0	0
ECM OV#6	ORCHARD VALLEY MIDDLE	ECM Motor Exhaust Fans	8,070	2.7	0
ECM OV#7	ORCHARD VALLEY MIDDLE	Lighting Upgrade - Interior/Exterior	42,112	10.6	0
ECM OV#8	ORCHARD VALLEY MIDDLE	Lighting Controls	30,256	0.0	0

ENERGY CONSUMPTION SAVINGS – PARTIAL TABLE 3 OF 4					
ECM BE#1	BELLS ELEMENTARY	Install 7 new CFL fixtures	1,034	0.0	0
ECM BE#2	BELLS ELEMENTARY	Install 19 new occupancy sensors	3,257	0.0	0
ECM BI#1	BIRCHES ELEMENTARY	Install 7 new CFL fixtures	1,034	0.0	0
ECM BI#2	BIRCHES ELEMENTARY	Replace 15 MH fixtures with LEDs	4,483	2.1	0
ECM BI#3	BIRCHES ELEMENTARY	Replace 1 old LED exit sign with newer LED exit sign	1,927	0.1	0
ECM BI#4	BIRCHES ELEMENTARY	Install 20 new occupancy sensors	2,824	1.0	0
ECM HU#1	HURFFVILLE ELEMENTARY	Replace 23 incandescent lamps with CFLs	2,786	0.0	0
ECM HU#2	HURFFVILLE ELEMENTARY	Replace 6 incandescent Exit signs with new LED Exit signs	1,726	0.0	0
ECM HU#3	HURFFVILLE ELEMENTARY	Replace 6 MH fixtures with LEDs	1,793	0.0	0
ECM HU#4	HURFFVILLE ELEMENTARY	Install 27 new occupancy sensors	4,241	2.0	0
ECM TJ#1	THOMAS JEFFERSON ELEMENTARY	Lighting Upgrade - Interior/Exterior	20,681	6.0	0
ECM TJ#2	THOMAS JEFFERSON ELEMENTARY	Lighting Controls	18,692	0.0	0
ECM TJ#3	THOMAS JEFFERSON ELEMENTARY	Replace Gym, Café and Stage with RTU	259,391	25.8	-9906
ECM TJ#4	THOMAS JEFFERSON ELEMENTARY	High Efficiency Gas Domestic Boiler	77,714	0.0	-2709
ECM TJ#5	THOMAS JEFFERSON ELEMENTARY	High Efficiency XFMR	50,646	9.7	0
ECM TJ#6	THOMAS JEFFERSON ELEMENTARY	Walk-in Controls	2,010	0.0	0
ECM TJ#7	THOMAS JEFFERSON ELEMENTARY	Exterior Door Replacement	6,476	0.0	0

ENERGY CONSUMPTION SAVINGS – PARTIAL TABLE 4 OF 4					
ECM WE#1	WEDGWOOD ELEMENTARY	Install 5 new CFL fixtures	540	0.0	0
ECM WE#2	WEDGWOOD ELEMENTARY	Replace existing high bay MH light fixtures with 15 LEDs	4,916	1.0	0
ECM WE#3	WEDGWOOD ELEMENTARY	Replace 19 LED exit signs with newer LED exit signs	3,662	1.0	0
ECM WE#4	WEDGWOOD ELEMENTARY	Install 26 occupancy sensors	3,211	0.0	0
ECM WH#1	WHITMAN ELEMENTARY	Replace 11 incandescent lamps with CFLs	1,060	0.0	0
ECM WH#2	WHITMAN ELEMENTARY	Replace 15 high bay MH fixtures with LEDs	4,916	1.0	0
ECM WH#3	WHITMAN ELEMENTARY	Replace 16 old LED exit signs with newer LED exit signs	3,003	1.0	0
ECM WH#4	WHITMAN ELEMENTARY	Install 10 occupancy sensors	3,476	0.0	0
ECM ECC#1	GRENLOCH ECC	Replace gas DHW heater in old school	0	0.0	26
ECM ECC#2	GRENLOCH ECC	Replace electric DHW heater in New School	481	3.2	0
TOTAL			1,226,543	130.20	-2491

Further analysis of cash flow projections are provided in Section IX of this report for the 15-year term of the ESIP.

II. Introduction

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

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

III. Energy Audit Results

The Washington Township BOE had a series of energy audits, consisting of the following school building facilities:

- Washington Township High School, Bells Elementary School, Birches Elementary School, Hurffville Elementary School, Wedgewood Elementary School, Whitman Elementary School and Grenloch Terrace Early Childhood Development Center performed by Steven Winters Associates in 2012 and
- Bunker Hill Middle School, Chestnut Ridge Middle School, Orchard Valley Middle School and Thomas Jefferson Elementary School by Concord Engineering in 2013.

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

The report provided a list of recommendations for each public school building and was considered the base scope of energy conservation measures used to develop this Energy Savings Plan. In addition, information regarding building occupancy, operating hours, and utility data was utilized to for creating the baseline building profile. Items that were considered more appropriate for alternate projects were not included in the Energy Savings Plan

Prior to inclusion of a recommended ECM into this ESP, Remington & Vernick Engineers completed a construction cost verification to ensure valid project costs.

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

SUMMARY OF ENEREGY AUDIT REPORT RECOMMENDATIONS - 2012	
ECM#	DESCRIPTION
HIGH SCHOOL	
ECM1	Replace 8 incandescent lamps with CFLs (9/10 Building)
ECM2	Replace 100 incandescent lamps with CFLs (11/12 Building)
ECM3	Replace 140 incandescent lamps with CFLs (Core Building)
ECM4	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)
ECM5	Replace 92 high bay metal halide fixtures with LEDs (11/12 Building)
ECM6	Install 127 new occupancy sensors (9/10 Building)
ECM7	Install 62 new LEDs in stairwells (9/10 Building)
ECM8	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)
ECM9	Install 100 new occupancy sensors (11/12 Building)
ECM10	Install 20 new LEDs in stairwells (Core Building)
ECM11	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)
ECM12	Install 49 new occupancy sensors (Core Building)
BELLS ELEMENTARY	
ECM1	Install 7 new CFL fixtures
ECM2	Replace 15 MH fixtures with LEDs
ECM3	Install 19 new occupancy sensors
BIRCHES ELEMENTARY	
ECM1	Install 7 new CFL fixtures
ECM2	Replace 15 MH fixtures with LEDs
ECM3	Replace 1 old LED exit sign with newer LED exit sign
ECM4	Install 20 new occupancy sensors
HURFFVILLE ELEMENTARY	
ECM1	Replace 23 incandescent lamps with CFLs
ECM2	Replace 6 incandescent Exit signs with new LED Exit signs
ECM3	Replace 6 MH fixtures with LEDs
ECM4	Install 27 new occupancy sensors
WEDGWOOD ELEMENTARY	
ECM1	Install 5 new CFL fixtures
ECM2	Replace existing high bay MH light fixtures with 15 LEDs
ECM3	Replace 19 LED exit signs with newer LED exit signs
ECM4	Install 26 occupancy sensors
WHITMAN ELEMENTARY	
ECM1	Replace 11 incandescent lamps with CFLs
ECM2	Replace 15 high bay MH fixtures with LEDs
ECM3	Replace 16 old LED exit signs with newer LED exit signs
ECM4	Install 10 occupancy sensors
GRENLOCH ECC	
ECM1	Replace gas DHW heater in old school
ECM2	Replace electric DHW heater in New School

SUMMARY OF ENEREGY AUDIT REPORT RECOMMENDATIONS - 2013	
ECM#	DESCRIPTION
BUNKER HILL MIDDLE	
ECM1	Lighting Upgrade - Interior/Exterior
ECM2	Lighting Controls
ECM3	Vending Miser Controls
ECM4	Refrigerator Replacement
ECM5	Walk-in Controls
ECM6	High Efficiency XFMR
ECM7	Chiller Replacement
ECM8	Condensing Boiler Installation
ECM9	Energy Recovery Replacement
CHESTNUT RIDGE MIDDLE	
ECM1	Vending Miser Controls
ECM2	Refrigerator Replacement
ECM3	Walk-in Controls
ECM4	High Efficiency Transformers
ECM5	Domestic Boiler Upgrade
ECM6	Kitchen Hood Controls
ECM7	Window Replacement
ECM8	Controls Optimization
ECM9	ECM Motor Exhaust Fans
ECM10	Exterior Door Replacement
ECM11	Lighting Upgrade - Interior/Exterior
ECM12	Lighting Controls
ECM13	3-Way to 2-Way CHW Valves
ORCHARD VALLEY MIDDLE	
ECM1	Vending Miser Controls
ECM2	Refrigerator Replacement
ECM3	Washing Machine Replacement
ECM4	Walk-in Controls
ECM5	High Efficiency Transformers
ECM6	Domestic Boiler Upgrade
ECM7	Kitchen Hood Controls
ECM8	Window Replacement
ECM9	Exterior Door Replacement
ECM10	ECM Motor Exhaust Fans
ECM11	3-Way to 2-Way CHW Valves
ECM12	Lighting Upgrade - Interior/Exterior
ECM13	Lighting Controls
THOMAS JEFFERSON ELEMENTARY	
ECM1	Lighting Upgrade - Interior/Exterior
ECM2	Lighting Controls
ECM3	Replace Gym, Café and Stage with HP
ECM4	Replace Gym, Café and Stage with RTU
ECM5	Convert Airedale Units to GSHP
ECM6	High Efficiency Gas Domestic Boiler
ECM7	High Efficiency XFMR
ECM8	Walk-in Controls
ECM9	Refrigerator Replacement
ECM10	Exterior Door Replacement

IV. Historic Energy Consumption and Costs

The public school buildings are currently delivered electricity from Atlantic City Electric (ACE) under various rate tariffs. Natural Gas is provided by South Jersey Gas (SJG) to all public school buildings facilities. The utility data provided by the BOE represents the calendar year from July 2013 to June 2014. Each facility's utility data was tabulated and plotted in graph form and is provided in the Historic Energy Consumption and Cost Appendix. The tables below summarize the annual usage and average cost per unit for each facility.

ELECTRIC UTILITY SUMMARY						
FACILITY	UTILITY PROVIDER	ELECTRIC USAGE (kWh)	DEMAND COST ($/kW)	SUPPLY COST ($/kWh)	DELIVERY COST ($/kWh)	TOTAL ELECTRIC COST ($/kWh)*
High School	ACE	6,139,532	$0.239	$0.0779	$0.0363	$0.144
Bunker Hill Middle	ACE	1,429,600	$0.239	$0.0779	$0.0355	$0.143
Chestnut Ridge Middle	ACE	1,583,408	$0.239	$0.0779	$0.0322	$0.146
Orchard Valley Middle	ACE	1,293,964	$0.239	$0.0779	$0.0343	$0.158
Bells Elementary	ACE	534,800	$0.239	$0.0779	$0.0350	$0.166
Birches Elementary	ACE	571,920	$0.239	$0.0779	$0.0278	$0.149
Hurffville Elementary	ACE	652,800	$0.239	$0.0779	$0.0347	$0.151
Thomas Jefferson Elementary	ACE	1,383,200	$0.239	$0.0779	$0.0347	$0.140
Wedgwood Elementary	ACE	563,680	$0.239	$0.0779	$0.0348	$0.157
Whitman Elementary	ACE	567,680	$0.239	$0.0779	$0.0350	$0.169
Grenloch ECC	ACE	75,291	$0.046	$0.0783	$0.0780	$0.165

*Includes all applicable Customer Charges

NATURAL GAS UTILITY SUMMARY			
FACILITY	UTILITY PROVIDER	NATURAL GAS USAGE (THERM)	NATURAL GAS COST ($/THERM)
High School	SJG	99,962	$0.929
Bunker Hill Middle	SJG	39,845	$1.048
Chestnut Ridge Middle	SJG	62,371	$1.056
Orchard Valley Middle	SJG	51,074	$1.117
Bells Elementary	SJG	21,653	$0.999
Birches Elementary	SJG	28,888	$1.005
Hurffville Elementary	SJG	26,382	$1.012
Thomas Jefferson Elementary	SJG	1,606	$4.804
Wedgwood Elementary	SJG	31,599	$1.000
Whitman Elementary	SJG	34,134	$1.023
Grenloch ECC	SJG	11,567	$0.839

V. Energy Conservation Measures (ECM)

High School Lighting, Occupancy Sensor & Exterior Door Upgrades

ECM HS#1: Replace 8 incandescent lamps with CFLs (9/10 Building)

On the day of the site visit, SWA completed a lighting inventory of the 9/10 Building (see Appendix C). The existing lighting inventory contained a total of 8 inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $225
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$225	501	0.0	0	0.0	$0	$72	5	$361	3.1	60%	12%	18%	$136	897

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#2: Replace 100 incandescent lamps with CFLs (11/12 Building)

On the day of the site visit, SWA completed a lighting inventory of the 11/12 Building (see Appendix C). The existing lighting inventory contained a total of 100 inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $2,806
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$2,806	6,479	0.0	0	0.1	$0	$933	5	$4,665	3.0	66%	13%	20%	$1,859	11,601

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#3: Replace 140 incandescent lamps with CFLs (Core Building)

On the day of the site visit, SWA completed a lighting inventory of the Core Building (see Appendix C). The existing lighting inventory contained a total of 140 inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $3,928
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$3,928	12,331	0.0	0	0.1	$0	$1,776	5	$8,878	2.2	126%	25%	35%	$4,950	22,079

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#4: Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)

On the day of the site visit, SWA completed a lighting inventory of the 9/10 Building (see Appendix C). The gymnasium lighting consists of standard probe start Metal Halide (MH) lamps. SWA recommends replacing the interior higher wattage 320W MH fixtures with T5 pendant lamps which offer better performance characteristics. They produce higher light output both initially and over time, operate more efficiently, produce whiter light, last much longer and turn on and re-strike faster. Due to these characteristics, energy savings can be realized via one-to-one substitution of lower-wattage systems, or by taking advantage of higher light output and reducing the number of fixtures required in the space. The labor for the recommended installations is assumed to be performed by in-house electricians. For consistency, the district will use LED lighting (where applicable) instead of the T5 pendant lamps recommended by the Energy Audit. All costs and associated analysis based on utilizing LED replacements.

Installation cost:

Estimated installed cost: $26,325

Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$26,325	10,430	2.0	0	0.1	$0	$1,502	10	$15,024	17.5	-43%	-4%	-9%	-$11,301	18,675

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#5: Install 127 new occupancy sensors (9/10 Building)

On the days of the site visits, SWA completed a lighting inventory of the 9/10 Building (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:

Estimated installed cost: $31,391
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$28,851	77,297	0.0	0	0.6	$0	$11,131	10	$111,308	2.6	286%	29%	37%	$82,457	138,400

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#6: Install 62 new LEDs in stairwells (9/10 Building)

On the day of the site visit, SWA completed a lighting inventory of the 9/10 building (see Appendix C). The school currently contains T8 fluorescent lighting fixtures that are operated 16 hours per day in stairwells. Technology called bi-level lighting, combines fluorescent lighting fixtures with an occupancy sensor. These efficient light fixtures operate at a minimal light level in order to meet code and safety requirements and power up to a higher level when any motion is detected in the stairwells. The 9/10 building would be an appropriate application for these fixtures since there are large periods of time when the stairwells should be unoccupied. For consistency, the district will use LED lighting, where applicable, instead of the bi-level lighting recommended by the Energy Audit.

Installation cost:
Estimated installed cost: $19,923
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$17,443	13,234	0.0	0	0.1	$0	$1,906	15	$28,585	9.2	64%	4%	7%	$11,142	23,695

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Smart Start – Occupancy controlled hi-low fluorescent controls ($35 per control) – If bi-level used
• NJ Clean Energy – SmartStart program – New LED – Stairwell and passageway luminaries ($40 per fixture) – If LEDs used
• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#7: Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)

During the field audit, SWA completed a building lighting inventory (see Appendix C). SWA observed that the building contains a number of old LED Exit signs. SWA recommends replacing these with newer low wattage LED types. Replacing existing Exit signs with newer LED Exit signs can result in lower kilowatt-hour consumption, as well as lower maintenance costs. Since Exit signs operate 24 hours per day, they can consume large amounts of energy. In addition, older Exit signs require frequent maintenance due to the short life span of the lamps that light them. LED Exit signs last at least 5 years. In addition, LED Exit signs offer better fire code compliance because they are maintenance free in excess of 10 years. LED Exit signs are usually brighter than comparable incandescent or fluorescent signs, and have a greater contrast with their background due to the monochromatic nature of the light that LEDs emit. The building owner may decide to perform this work with in-house resources from the Maintenance Department on a scheduled, longer timeline than otherwise performed by a contractor.

Installation cost:
Estimated installed cost: $10,782
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$10,782	8,475	1.0	0	0.1	$0	$1,221	15	$18,310	8.8	70%	5%	7%	$7,528	15,174

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#8: Install 100 new occupancy sensors (11/12 Building)

On the days of the site visits, SWA completed a lighting inventory of the 11/12 Building (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:

Estimated installed cost: $24,717
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$22,717	57,908	0.0	0	0.5	$0	$8,339	10	$83,388	2.7	267%	27%	35%	$60,671	103,684

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
    - Maximum Incentive Amount: $2,000
- NJ Clean Energy – Direct Install (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#9: Install 20 new LEDs in stairwells (Core Building)

On the day of the site visit, SWA completed a lighting inventory of the Core Building (see Appendix C). The school currently contains T8 fluorescent lighting fixtures that are operated 16 hours per day in stairwells. Technology called bi-level lighting, combines fluorescent lighting fixtures with an occupancy sensor. These efficient light fixtures operate at a minimal light level in order to meet code and safety requirements and power up to a higher level when any motion is detected in the stairwells. The Core Building would be an appropriate application for these fixtures since there are large periods of time when the stairwells should be unoccupied. For consistency, the district will use LED lighting, where applicable, instead of the bi-level lighting recommended by the Energy Audit.

Installation cost:

Estimated installed cost: $6,425
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$5,725	3,128	0.0	0	0.0	$0	$450	15	$6,756	12.7	18%	1%	2%	$1,031	5,601

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Smart Start – Occupancy controlled hi-low fluorescent controls ($35 per control) – If bi-level used
• NJ Clean Energy – SmartStart program – New LED – Stairwell and passageway luminaries ($40 per fixture) – If LEDs used
• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#10: Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)

During the field audit, SWA completed a building lighting inventory (see Appendix C). SWA observed that the building contains a number of old LED Exit signs. SWA recommends replacing these with newer low wattage LED types. Replacing existing Exit signs with newer LED Exit signs can result in lower kilowatt-hour consumption, as well as lower maintenance costs. Since Exit signs operate 24 hours per day, they can consume large amounts of energy. In addition, older Exit signs require frequent maintenance due to the short life span of the lamps that light them. LED Exit signs last at least 5 years. In addition, LED Exit signs offer better fire code compliance because they are maintenance free in excess of 10 years. LED Exit signs are usually brighter than comparable incandescent or fluorescent signs, and have a greater contrast with their background due to the monochromatic nature of the light that LEDs emit. The building owner may decide to perform this work with in-house resources from the Maintenance Department on a scheduled, longer timeline than otherwise performed by a contractor.

Installation cost:
Estimated installed cost: $7,188
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$7,188	5,913	0.8	0	0.0	$0	$852	15	$12,775	8.4	78%	5%	8%	$5,587	10,587

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM HS#11: Install 49 new occupancy sensors (Core Building)

On the days of the site visits, SWA completed a lighting inventory of the Core Building (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:

Estimated installed cost: $12,111
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$11,131	38,038	0.0	0	0.3	$0	$5,477	10	$54,775	2.0	392%	39%	48%	$43,644	68,107

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
    - Maximum Incentive Amount: $980
- NJ Clean Energy – Direct Install (Up to 70% of installed costs)

ECM HS#12: Exterior Door Replacement

Description:

There are approximately thirty two older metal door and framed exterior doors located around all of the buildings. These doors appeared to be poorly insulated and infiltration was occurring between the doors and the frame.

The installation of a new better insulated and tighter frame constructed door will reduce the heat loss caused by poor insulation and infiltration. Prior to installation district engineer/architect should verify all measurements and code requirements.

Energy Savings Calculations:

Thermal Loss values were calculated for each month based on the average monthly temperature obtained for July 2013 to June 2014. Cooling savings were not calculated for this measure as entry ways have heating only units at the doors and cooling losses would be minimal. Insulation and infiltrations values for the existing doors were estimated.

$$\text{Thermal Loss Savings (kBtu)} = (U_E - U_P) \times \text{Door Area} \times (T_{Indoor} - T_{Avg\ Outdoor}) \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{Btu}}$$

$$\text{Infiltration Loss (kBtu)} = \text{Door Area} \times \frac{\text{CFM}}{\text{SF}} \times (T_{indoor} - T_{Avg\ Outdoor}) \times 1.08 \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{But}}$$

$$\text{Heating Savings (Therm)} = \text{Thermal Loss Savings (Heating)} \times \frac{1}{\text{Efficiency}} \times \frac{1\ \text{Therm}}{100\ \text{kBtu}}$$

EXTERIOR DOOR REPLACEMENT CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Description:	Existing Metal Doors	New Insulated Doors	
Quantity of Doors	32	32	
Door Area (SF)	1414	1414	
R-Value (SF*°F/BTU/HR)	2.00	15.00	
Infiltration Rate (CFM/SF)	2.0	1.0	
Indoor Temperature Heating (^{o}F)	70	70	
Average Thermal Loss Rate Heating (BTU/HR)	16,870	2,246	14,624
Heating Degree Days (65^{o}F)	3743	3743	
Thermal Losses Heating (kBtu)	458,432	281,939	176,493
Heating System Efficiency (%)	78.0%	78.0%	
Natural Gas Cost ($/Therm)	$0.929	$0.929	-
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Natural Gas Usage (Therm)	5,875	3,609	2,266
Energy Cost Savings ($)	$5,458	$3,359	$2,105
Comments:	1. Proposed Infiltration Based on ASHRAE 90.1 - 2007 2. Savings Based on Avg. Monthly Temperature for Jul-13 to Jun-14		

Energy Savings Summary:

ECM #12 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$160,000
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$160,000
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$2,105
Total Yearly Savings ($/Yr):	$2,105
Estimated ECM Lifetime (Yr):	20
Simple Payback	66.9
Simple Lifetime ROI	-70%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$47,849
Internal Rate of Return (IRR)	-9%
Net Present Value (NPV)	($112,151)

ECM BH#1

Bunker Hill Lighting Upgrades

The majority of the interior lighting throughout the Bunker Hill Middle School is provided with fluorescent fixtures with older generation, 32W T8 lamps and electronic ballasts. Although these T8 lamps are considered fairly efficient, further energy savings can be achieved by replacing the existing T8 lamps with new generation, 800 series 28W T8 lamps without compromising light output. The energy Audit recommends that these fixtures remain unmodified due to the extensive costs which will be incurred if these fixtures are to be re-lamped and re-ballasted, which results in a long payback period.

The ECM also includes replacement of any incandescent lamps with compact fluorescent lamps. Compact fluorescent lamps (CFL's) were designed to be direct replacements for the standard incandescent lamps which are common to table lamps, spot lights, hi-hats, bathroom vanity lighting, etc. The light output of the CFL has been designed to resemble the incandescent lamp. The color rendering index (CRI) of the CFL is much higher than standard fluorescent lighting, and therefore provides a much "truer" light. The CFL is available in a myriad of shapes and sizes depending on the specific application. Typical replacements are: a 13-Watt CFL for a 60-Watt incandescent lamp, an 18-Watt CFL for a 75-Watt incandescent lamp, and a 26-Watt CFL for a 100-Watt incandescent lamp. The CFL is also available for a number of "brightness colors" that is indicated by the Kelvin rating of the lamp. A 2700K CFL is the "warmest" color available and is closest in color to the incandescent lamp. CFL's are also available in 3000K, 3500K, and 4100K. The 4100K would be the "brightest" or "coolest" output. A CFL can be chosen to screw right into your existing fixtures, or hardwired into your existing fixtures. Where the existing fixture is controlled by a dimmer switch, the CFL bulb must be compatible with a dimmer switch. In some locations the bulb replacement will need to be tested to make sure the larger base of the CFL will fit into the existing fixture. The energy usage of an incandescent compared to a compact fluorescent approximately is 3 to 4 times greater. In addition to the energy savings, compact fluorescent fixtures burn-hours are 8 to 15 times longer than incandescent fixtures ranging from 6,000 to 15,000 burn-hours compared to incandescent fixtures ranging from 750 to 1000 burn-hours. However, the maintenance savings due to reduced lamp replacement is offset by the higher cost of the CFL's compared to the incandescent lamps.

The All Purpose room at the Bunker Hill Middle School is currently lit via 250 watt Metal Halide HID fixtures. The space would be better served with a more efficient, fluorescent lighting system. The ECM recommends upgrading the lighting to an energy-efficient T5 high output system that includes new four lamp, 54 watt high output fixtures.

This measure replaces the 250 watt HID MH fixtures with a well-designed T5 high output (HO) system. T5 High output fixtures with reflectors and wire guards will be required in order to meet the mandated 50 foot-candle average within the spaces.

For consistency, the district will use LED lighting, where applicable, instead of the T5 HO system recommended by the Energy Audit.

The exterior lighting at the Bunker Hill Middle School is currently lit via 100 watt high pressure sodium wall packs, 250 watt high pressure sodium pole mounted shoe box fixtures, 250 watt high pressure sodium pole mounted flood lights, and 100 watt high pressure sodium recessed fixtures. The exterior would be better served by the installation of a series of LED wall pack fixtures, LED flood light fixtures, and LED retrofit of existing shoe box/recessed fixtures in which it would not be cost effective to replace in their entirety.

This measure replaces the all exterior fixtures with lower wattage LED technologies.

Energy Savings Calculations:

ECM #1 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$129,730
NJ Smart Start Equipment Incentive ($):	$2,681
Net Installation Cost ($):	$127,049
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$10,844
Total Yearly Savings ($/Yr):	$10,844
Estimated ECM Lifetime (Yr):	10
Simple Payback	11.7
Simple Lifetime ROI	-15%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$108,443
Internal Rate of Return (IRR)	-3%
Net Present Value (NPV)	($18,606)

ECM BH#2

Bunker Hill Lighting Controls / Occupancy Sensors

Some of the lights in Bunker Hill Middle School are left on unnecessarily. In many cases the lights are left on because of the inconvenience to manually switch lights off upon leaving the room or the lights were already on when a room is first occupied. This is common in rooms that are occupied for only short periods and only a few times per day. In some instances lights are left on due to the misconception that it is better to keep the lights on rather than to continuously switch lights on and off. Although increased switching reduces lamp life, the energy savings outweigh the lamp replacement costs. The payback timeframe for when to turn the lights off is approximately two minutes. If the lights are expected to be off for at least a two minute interval, then it pays to shut them off.

Lighting controls come in many forms. Sometimes an additional switch is adequate to provide reduced lighting levels when full light output is not needed. Occupancy sensors detect motion and will switch the lights on when the room is occupied. Occupancy sensors can either be mounted in place of a current wall switch, on the ceiling to cover large areas, or be wall mounted to cover large areas.

The U.S. Department of Energy sponsored a study to analyze energy savings achieved through various types of building system controls. The referenced savings is based on the "Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways," document posted for public use April 2005. The study has found that commercial buildings have the potential to achieve significant energy savings through the use of building controls. The average energy savings are as follows based on the report:

• Occupancy Sensors for Lighting Control 20% - 28% energy savings.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 20% of the total light energy controlled by occupancy sensors (The majority of the savings is expected to be after school hours when rooms are left with lights on)

This ECM includes installation of ceiling, wall, or switch mount sensors for individual offices, classrooms, large bathrooms, personal bathrooms, storage closets, etc. Sensors shall be manufactured by Sensorswitch, Watt Stopper or equivalent.

The calculations adjust the lighting power usage by the applicable percent savings for each area that includes lighting controls.

Energy Savings Calculations:

Energy Savings = (%Savings × Controlled Light Energy (kWh/Yr))

Savings = Energy Savings (kWh) x Ave Elec Cost ($/ kWh)

Rebates and Incentives:

From the **NJ Smart Start® Program Incentives Appendix**, the installation of a lighting control device warrants the following incentive:

Smart Start Incentive
= (# Wall mount sensors × $20 per sensor)
+ (# Ceiling mount sensors × $35 per sensor)

Energy Savings Summary

ECM #2 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$66,010
NJ Smart Start Equipment Incentive ($):	$2,795
Net Installation Cost ($):	$63,215
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$4.217
Total Yearly Savings ($/Yr):	$4,217
Estimated ECM Lifetime (Yr):	15
Simple Payback	15.0
Simple Lifetime ROI	0.1%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$63,260
Internal Rate of Return (IRR)	0%
Net Present Value (NPV)	$45

ECM BH#3

Bunker Hill Vending Miser Controls

The Bunker Hill Middle School currently utilizes vending machines in select areas within the building. Vending machines are common within cafeteria's and faculty rooms which can be in use for a limited time during the day. The installation of the Vending Miser system will help reduce the operating hours of vending machines.

Cold beverage machines regularly operate inefficiently trying to maintain a constant cool temperature within the machine and snack machines with no cooling usually have lights that operate 24/7. The VendingMiser® system incorporates innovative energy-saving technology into a small plug-and-play device that in conjunction with a passive infrared sensor regulate the operation of the cold beverage and snack machines based on occupancy and room temperature.

This ECM approximates the installation of two (2) of these control systems for the cold beverage machine.

Energy Savings

Cold Drink and Snack Vending Machine Energy Conservation Project

Energy Analysis Prepared For:

Bunker Hill Middle School

www.VendingMiserStore.com

Input Variables	
Energy Costs ($0.000 per kwh)	$0.143
Facility Occupied Hours per Week	60
Number of Cold Drink, Vending Machines	2
Number of Uncooled Snack Machines	0
Power Requirements of Cold Drink Machine (avg. watts)	427
Power Requirements of Snack Machine (avg.	100
VendingMiser Sale Price (for cold drink machines)	$200.00
OfficeMiser Sale Price (for snack machines)	$100.00

Savings Analysis

	Before	After	
Cold Drink Machines	$1,070.50	$498.93	Cost of Operation
	7486	3489	kWh
		53%	% Energy Savings
Snack Machines	$0.00	$0.00	Cost of Operation
	0	0	kWh
		0%	% Energy Savings

Project Summary

Present kWh	Projected kWh	kWh Savings per Year
7486	3489	3997

Present Costs	Projected Costs	Annual Savings	Percent Savings	Total Project Cost	Break Even (Months)
$1,070.50	$498.93	$571.57	53%	$500.00	10.5

Energy Savings Summary:

ECM #3 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$500
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$500
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$572
Total Yearly Savings ($/Yr):	$572
Estimated ECM Lifetime (Yr):	10
Simple Payback	0.9
Simple Lifetime ROI	1043%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$5,716
Internal Rate of Return (IRR)	114%
Net Present Value (NPV)	$5,216

ECM BH#4

Bunker Hill Walk-In Controls

The two refrigerated walk-in cooler/freezers have a bank of evaporator fans that circulate the cold air over and under the food. These banks of evaporator fans (~1/20 HP motors) run continuously and give off heat that must be removed by the refrigeration.

This measure would install an evaporator fan controller that features two-speed operation of the evaporator fans – high speed during cooling, and low speed or off when not cooling manufactured by Frigitek or equivalent.

Energy Savings Calculations:
Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated with using existing equipment characteristics.

$$\text{kWh Savings Evap Fans} = \frac{(\text{Amps} \times \text{Volts} \times \text{Phase}^{1/2})}{1000} \times 0.55 \times 8760 \times 35.52\%$$

$$\text{kWh Savings Evap Reduced Heat} = \text{kWh Savings Evap Fans} \times 0.28 \times 1.6$$

$$\text{kWh Savings Controls} = \frac{\text{Amps}_{CP} \times \text{Volts}_{CP} \times \text{Phase}^{1/2}_{CP}}{1000} \times 0.85 \times (35\% \times 2{,}195 \text{ Hrs} + 55\% \times 6{,}565 \text{ Hrs}) + \frac{\text{Amps}_{EF} \times \text{Volts}_{EF} \times \text{Phase}^{1/2}_{EF}}{1000} \times 0.55 \times 8760 \times 35.52\% \times 5\%$$

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	2	2	
Nameplate Amps of Evap Fan	1.0	1.0	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	7.1	7.1	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	1	1	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.143	$0.143	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Evaporator Fan Usage (KWH)	2,216	1,429	787
Evap Fan Heat Usage (KWH)	496	320	176
Compressor Usage (KWH)	6,078	5,774	304
Total Electric Usage (KWH)	8,791	7,524	1,267
Electric Cost ($)	$1,257	$1,076	$181
COMMENTS:	Walk-In Freezer		

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	2	2	
Nameplate Amps of Evap Fan	1.0	1.0	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	7.1	7.1	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	1	1	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.143	$0.143	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Evaporator Fan Usage (KWH)	2,216	1,429	787
Evap Fan Heat Usage (KWH)	496	320	176
Compressor Usage (KWH)	6,078	5,774	304
Total Electric Usage (KWH)	8,791	7,524	1,267
Electric Cost ($)	$1,257	$1,076	$181
COMMENTS:	Walk-In Refrigerator		

Energy Savings Summary:

ECM #4 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$2,940
NJ Smart Start Equipment Incentive ($):	$150
Net Installation Cost ($):	$2,790
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$362
Total Yearly Savings ($/Yr):	$362
Estimated ECM Lifetime (Yr):	10
Simple Payback	7.7
Simple Lifetime ROI	30%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$3,624
Internal Rate of Return (IRR)	5%
Net Present Value (NPV)	$834

ECM BH#5

Bunker Hill High Efficiency Transformer

Electrical distribution transformers play a key role in delivering electrical power to buildings as all the electrical power supplied to the building flows through them. Whether equipment is plugged in and turned on or not transformers continue to operate. Consider their impact on electricity consumption. Some transformers waste as much as 20% of billed electricity.

Older transformers in existing buildings may not have been built to meet the load requirements of today. Over the years electrical distribution has changed very little, however the connected equipment has changed dramatically. This dramatic change is derived from both the type of equipment (mostly electronic in nature) and the density of installed equipment. The impact of this change has had a direct impact on power quality and transformer efficiency.

When newer electronic equipment is introduced into buildings with older electrical systems power quality and transformer efficiency can suffer. According to a Department of Energy study performed in 1996 electronic equipment can increase losses by as much as 2.7 times. In real terms this would mean that a transformer that has a name- plate efficiency of 97% in reality is operating closer to 90% or lower. The difference represents additional costs to operate the transformer. Replacing your older transformers with Power smiths energy efficient E-Saver-C3 or T1000-C3 transformers can improve the reliability of your electronic equipment and significantly reduce electricity waste.

Power smith's energy efficient transformers have substantially lower losses (higher efficiency) than other transformers. These energy savings mean less kilowatt-hours (kWh) consumed and lower energy bills. Electricity demand charges also decline, thanks to reduced energy losses. These savings pay for the transformer many times over its installed life.

Energy Savings Summary:

ECM #5 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$28,130
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$28,130
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$3,225
Total Yearly Savings ($/Yr):	$3,225
Estimated ECM Lifetime (Yr):	20
Simple Payback	7.7
Simple Lifetime ROI	129%
Simple Lifetime Maintenance Savings	0
Simple Lifetime Savings	$64,490
Internal Rate of Return (IRR)	10%
Net Present Value (NPV)	$70,484

ECM BH#6

Bunker Hill Energy Recovery Wheel Replacement

Outside air is provided to the fan coil units through four rooftop energy recovery wheel units with no heating and cooling coils. These units are 15 years old and the housings are in good condition. The typical life expectancy of an energy recovery wheel is between 10 and15 years dependent on maintenance and cleaning. The existing wheels appears in good condition on the supply air side however an inspection on the OA intake side was not performed, however due to the age of the recovery media there is a potential for significant heat transfer loss in the system.

This ECM recommends replacing the energy recovery wheels in all four units with a new SEMCO Total Energy Recovery Wheel TE Series. The expected effectiveness of the new wheels is 75%. While not required it is recommended the district perform general repairs and refurbishment to the units to extend their useful life expectancy.

Energy Savings Calculations:

Heating Energy Savings:

Heating Load, BTU/Hr = 1.08 × Airflow (CFM) × O. A.%× (Indoor °F − Outdoor °F)

Occ Ventilation Heating Energy
$$= \frac{\text{Occ Heating Load}}{\Delta T \times Eff \times V} (Occ.HDD_{68°F} \times \text{NonSetback Hrs}) \times (1 - \text{Energy Rec. Eff.\%})$$

Unocc Ventilation Heating Energy
$$= \frac{\text{Unocc Heating Load}}{\Delta T \times Eff \times V} (Unocc.HDD_{60°F} \times \text{Setback Hrs}) \times (1 - \text{Energy Rec. Eff.\%})$$

Where:
HDD = number of Heating Degree Days as Specified Base Temperature
ΔT= Design temperature difference, º F
Eff = Efficiency of Energy Utilization
V = Heating value of fuel, BTU/kWh (3,413 Btu = 1 kWh)

Heating Cost Savings = Energy Savings (Therms) × Cost of Gas ($/Therm)

ENERGY RECOVERY HEATING ENERGY CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	Existing ERUs	New Wheels	
Total AHU Airflow (CFM)	28,000	28,000	
Occ. O.A. Percentage (%)	100%	100%	
Unocc. O.A. Percentage (%)	100%	100%	
Occ. Temp Diff (°F)	56	56	
Heating Degree Days (60°F)	3,743	3,743	
Heating System Efficiency (%)	79%	79%	
Energy Recovery Sys Efficiency	50%	75%	
Occupied Hours	10	10	
Occ O.A. Heating Load (Btu/Hr)	846,720	423,360	423,360
Occ O.A. Heating Energy (MMBtu)	872	436	436
Gas Cost ($/Therm)	$1.048	$1.048	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Natural Gas Usage (therm)	8,721	4,361	4,361
Energy Cost ($)	$9,140	$4,570	$4,570
COMMENTS:			

Cooling Energy Savings:

Cooling Energy savings are based on the energy required to condition outside air during occupied hours only. The cooling energy required for minimal outside air at unoccupied hours are negligible and therefore not included in this calculation. Enthalpy difference is based on design cooling day (95°F DB, 78°F WB), and average room conditions (75°F, 50% RH).

Cooling Load BTU/Hr
= 4.5 × Airflow (CFM) × O. A.%× Enthalpy Diff

Cooling Energy kWh
= Cooling Capacity,BTU/Hr × (1/EER) × Full Load Hrs × (1 − Energy Rec. Eff.%) 1000 W/kWh

Cooling Cost Savings = Energy Savings,kWh × Cost of Electricity ($/kWh)

ENERGY RECOVERY COOLING ENERGY CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	Existing ERUs	New Wheels	
Total AHU Airflow (CFM)	28,000	28,000	
Occ. O.A. Percentage (%)	100%	100%	
Occ. Enthalpy Diff (°F)	14	14	
Unocc. Enthalpy Diff (°F)	14	14	
Full Load Cooling Hrs	1,131	1,131	
Cooling System Efficiency (EER)	8.5	8.5	
Energy Recovery Sys Efficiency	50%	75%	
O.A. Cooling Load (Btu/Hr)	850,500	425,250	425,250
Elec Cost ($/kWh)	$0.143	$0.143	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Electric Usage (kWh)	113,167	56,583	56,583
Energy Cost ($)	$16,183	$8,091	$8,091
COMMENTS:			

Energy Savings Summary:

ECM #6 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$118,750
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$118,750
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$12,616
Total Yearly Savings ($/Yr):	$12,616
Estimated ECM Lifetime (Yr):	15
Simple Payback	9.4
Simple Lifetime ROI	60%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$189,925
Internal Rate of Return (IRR)	7%
Net Present Value (NPV)	$71,175

ECM CR#1

Chestnut Ridge Vending Miser Controls

The Chestnut Middle School currently utilizes vending machines in select areas within the building. Vending machines are common within cafeteria's and faculty rooms which can be in use for a limited time during the day. The installation of the Vending Miser system will help reduce the operating hours of vending machines.

Cold beverage machines regularly operate inefficiently trying to maintain a constant cool temperature within the machine and snack machines with no cooling usually have lights that operate 24/7. The VendingMiser® system incorporates innovative energy-saving technology into a small plug-and-play device that in conjunction with a passive infrared sensor regulate the operation of the cold beverage and snack machines based on occupancy and room temperature. This ECM approximates the installation of five (5) of these control systems, one (1) for the snack machine and four (4) for the cold beverage machine.

Energy Savings Calculation:

Cold Drink and Snack Vending Machine Energy Conservation Project

Energy Analysis Prepared For:

Bunker Hill Middle School

www.VendingMiserStore.com

Input Variables	
Energy Costs ($0.000 per kwh)	$0.146
Facility Occupied Hours per Week	60
Number of Cold Drink, Vending Machines	4
Number of Uncooled Snack Machines	1
Power Requirements of Cold Drink Machine (avg. watts)	427
Power Requirements of Snack Machine (avg.	100
VendingMiser Sale Price (for cold drink machines)	$200.00
OfficeMiser Sale Price (for snack machines)	$100.00

Savings Analysis

	Before	After	
Cold Drink Machines	$2,185.91	$1,018.93	Cost of Operation
	14972	6979	kWh
		53%	% Energy Savings

Snack Machines	$125.80	$44.93	Cost of Operation
	874	312	kWh
		64%	% Energy Savings

Project Summary

Present kWh	Projected kWh	kWh Savings per Year
15846	7291	8555

Present Costs	Projected Costs	Annual Savings	Percent Savings	Total Project Cost	Break Even (Months)
$2,313.52	$1,064.49	$1,249.03	54%	$1,125.00	10.8

Energy Savings Summary:

ECM #1 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$1,125
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$1,125
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$1,249
Total Yearly Savings ($/Yr):	$1,249
Estimated ECM Lifetime (Yr):	10
Simple Payback	0.9
Simple Lifetime ROI	1010%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$12,490
Internal Rate of Return (IRR)	101%
Net Present Value (NPV)	$11,365

ECM CR#2

Chestnut Ridge Walk-In Controls

The two refrigerated walk-in cooler/freezers have a bank of evaporator fans that circulate the cold air over and under the food. These banks of evaporator fans (~1/47 HP motors) run continuously and give off heat that must be removed by the refrigeration.

This measure would install an evaporator fan controller that features two-speed operation of the evaporator fans – high speed during cooling, and low speed or off when not cooling manufactured by Frigitek or equivalent.

Energy Savings Calculations:

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated with using existing equipment characteristics.

$$\text{kWh Savings Evap Fans} = \frac{\left(\text{Amps} \times \text{Volts} \times \text{Phase}^{\frac{1}{2}}\right)}{1000} \times 0.55 \times 8760 \times 35.52\%$$

$$\text{kWh Savings Evap Reduced Heat} = \text{kWh Savings Evap Fans} \times 0.28 \times 1.6$$

$$\text{kWh Savings Controls} = \frac{\text{Amps}_{CP} \times \text{Volts}_{CP} \times \text{Phase}_{CP}^{\frac{1}{2}}}{1000} \times 0.85 \times (35\% \times 2{,}195\ \text{Hrs} + 55\% \times 6{,}565\ \text{Hrs}) + \frac{\text{Amps}_{EP} \times \text{Volts}_{EP} \times \text{Phase}_{EP}^{\frac{1}{2}}}{1000} \times 0.55 \times 8760 \times 35.52\% \times 5\%$$

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	3	3	
Nameplate Amps of Evap Fan	0.6	0.6	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	3.8	3.8	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	3	3	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.146	$0.146	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Evaporator Fan Usage (KWH)	1,828	1,179	649
Evap Fan Heat Usage (KWH)	273	176	97
Compressor Usage (KWH)	5,635	5,353	282
Total Electric Usage (KWH)	7,736	6,708	1,028
Electric Cost ($)	$1,129	$979	$150
COMMENTS:	Walk-In Freezer		

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	2	2	
Nameplate Amps of Evap Fan	0.6	0.6	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	6.1	6.1	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	3	3	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.146	$0.146	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Evaporator Fan Usage (KWH)	1,219	786	433
Evap Fan Heat Usage (KWH)	273	176	97
Compressor Usage (KWH)	9,045	8,593	452
Total Electric Usage (KWH)	10,537	9,555	982
Electric Cost ($)	$1,538	$1,395	$143
COMMENTS:	Walk-In Refrigerator		

Energy Savings Summary:

ECM #2 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$2,940
NJ Smart Start Equipment Incentive ($):	$150
Net Installation Cost ($):	$2,790
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$293
Total Yearly Savings ($/Yr):	$293
Estimated ECM Lifetime (Yr):	10
Simple Payback	9.5
Simple Lifetime ROI	5%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$2,935
Internal Rate of Return (IRR)	1%
Net Present Value (NPV)	$145

ECM CR#3

Chestnut Ridge High Efficiency Transformer

Electrical distribution transformers play a key role in delivering electrical power to buildings as all the electrical power supplied to the building flows through them. Whether equipment is plugged in and turned on or not transformers continue to operate. Consider their impact on electricity consumption. Some transformers waste as much as 20% of billed electricity.

Older transformers in existing buildings may not have been built to meet the load requirements of today. Over the years electrical distribution has changed very little, however the connected equipment has changed dramatically. This dramatic change is derived from both the type of equipment (mostly electronic in nature) and the density of installed equipment. The impact of this change has had a direct impact on power quality and transformer efficiency.

When newer electronic equipment is introduced into buildings with older electrical systems power quality and transformer efficiency can suffer. According to a Department of Energy study performed in 1996 electronic equipment can increase losses by as much as 2.7 times. In real terms this would mean that a transformer that has a name- plate efficiency of 97% in reality is operating closer to 90% or lower. The difference represents additional costs to operate the transformer. Replacing your older transformers with Power smiths energy efficient E-Saver-C3 or T1000-C3 transformers can improve the reliability of your electronic equipment and significantly reduce electricity waste.

Power smith's energy efficient transformers have substantially lower losses (higher efficiency) than other transformers. These energy savings mean less kilowatt-hours (kWh) consumed and lower energy bills. Electricity demand charges also decline, thanks to reduced energy losses. These savings pay for the transformer many times over its installed life.

Energy Savings Summary:

ECM #3 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$87,500
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$87,500
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$11,029
Total Yearly Savings ($/Yr):	$11,029
Estimated ECM Lifetime (Yr):	20
Simple Payback	7.9
Simple Lifetime ROI	152%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$220,571
Internal Rate of Return (IRR)	11%
Net Present Value (NPV)	$133,071

ECM CR#4

Chestnut Ridge Domestic Boiler Upgrade

The Middle School has two 400 MBH Teledyne Laars Boilers attached to a single 1200 gallons storage tank to service domestic hot water for the entire building. These boilers are nearing the end of their useful life expectancy and could be replaced with a much more efficient condensing type gas fired boiler.

This ECM will replace the existing Laars boilers with new Lochinvar Armor Model AWN400PM. The new boilers will be piped to the existing storage tank to be reused.

Energy Savings Calculations:

Energy Density for "Education" type building = 5.2 kBtu / SF / year

$$DHW\ Heat\ Usage = Energy\ Density\left(\frac{kBtu\ yr}{SF}\right) \times Building\ Square\ Footage\ (SF)$$

$$DHW\ Total\ Usage = \frac{Dom\ HW\ Heat\ Cons.(Btu)}{Heating\ Eff.(\%) \times Fuel\ Heat\ Value\left(\frac{BTU}{Fuel\ Unit}\right)}$$

$$Energy\ Cost = Heating\ Fuel\ Usage(Fuel\ Units) \times Ave\ Fuel\ Cost\left(\frac{\$}{Fuel\ Unit}\right)$$

CONDENSING DOM. HOT WATER HEATER CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	Existing Hot Water Heater	Bradford White High Efficiency	
Building Type	Education Building		
Building Square-foot	107,000	107,000	
Domestic Water Usage, kBtu	556,400.00	556,400.00	
DHW Heating Fuel Type	Gas	Gas	
Heating Efficiency	75%	92%	17%
Total Usage (kBTU)	741,867	604,783	137,084
Nat Gas Cost ($/Therm)	$ 1.056	$ 1.056	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Natural Gas Usage (Therms)	7,419	6,048	1,371
Energy Cost ($)	$7,834	$6,387	$1,448
COMMENTS:	Savings are based on Energy Information Administration Commercial Building Energy Consumption Survey 2003 Information		

Energy Savings Summary:

ECM #4 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$42,000
NJ Smart Start Equipment Incentive ($):	$1,400
Net Installation Cost ($):	$40,600
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$1,448
Total Yearly Savings ($/Yr):	$1,448
Estimated ECM Lifetime (Yr):	20
Simple Payback	28.0
Simple Lifetime ROI	-29%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$28,956
Internal Rate of Return (IRR)	-3%
Net Present Value (NPV)	($11,644)

ECM CR#5

Chestnut Ridge HVAC Control Optimization

The Middle School currently has a Niagara Framework Building Management System. The system currently controls the air handling equipment, terminal boxes, boilers, chillers, pumps, and exhaust fans through various occupied and unoccupied schedules. It was noted that some overheating was occurring in various parts of the building and a cursory review of the control system confirmed some spaces were above the space set point. It is recommended the District optimize performance of the system by performing an operational performance test / retrocommissioning of the control sensors and equipment. This will allow any non-functioning sensors or equipment to be identified and then replaced to maintain the full functionality of the system.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 2.5% of the electricity and 5% for the gas utility in this building.

Energy Savings Calculations:

Energy savings for each utility is calculated with the equation below.

Energy Savings (Utility) = Current Energy Consumption × Estimated Savings,%

Following table summarizes energy savings for this facility via implementation of an Energy Management System Optimization:

DDC ENERGY MANAGEMENT SYSYEM CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	Existing Controls w/ DCC	Optimization	
Existing Nat Gas Usage (The rms)	27,145	-	
Existing Electricity Usage for HVAC (kWh)	847,982	-	
Energy Savings, Nat. Gas	-	5%	
Energy Savings, Electricity	-	3%	
Gas Cost ($/Therm)	$1.056	$1.056	
Electricity Cost ($/kWh)	$0.146	$0.146	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Natural Gas Usage (The rms)	27,145	25,788	1,357
Electricity Usage (kWh)	847,982	826,782	21,200
Natural Gas Cost ($)	$28,665	$27,232	$1,433
Electricity Cost ($)	$123,805	$120,710	$3,095
Energy Cost ($)	$152,470	$147,942	$4,528
COMMENTS:			

Demand savings due to implementation of this ECM is minimal.

Energy Savings Summary:

ECM #5 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$62,500
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$62,500
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$4,528
Total Yearly Savings ($/Yr):	$4,528
Estimated ECM Lifetime (Yr):	15
Simple Payback	13.8
Simple Lifetime ROI	9%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$67,923
Internal Rate of Return (IRR)	1%
Net Present Value (NPV)	$5,423

ECM CR#6

Chestnut Ridge ECM Motor Exhaust Fans

Electronically Commutated Motors (ECM) are proven to generate substantial savings on small motor applications. These motors currently are available in sizes up to 1 horsepower, and provide efficiencies similar to how NEMA premium efficiency motor would at a large horsepower. The motor works much like a direct current (DC) motor and is without mechanical brushes and the commuter reduces friction losses in the motor. The motors are programmable and can be used for a wide range of applications.

This measure would replace this existing Greenheck roof exhaust fans with new direct drive varigreen exhaust fans with ECM motors.

Energy Savings Calculations:

Measured savings for ECM motors has proven that an approximately 65% reduction in power can be realized through the installation these motors.

$$\text{Electric Energy (kWh)} = 0.746\frac{\text{kW}}{\text{HP}} \times \text{HP}$$

$$\text{Electric Energy (kWh)} = 0.746\frac{\text{kW}}{\text{HP}} \times \text{HP} \times \text{Operating Hours} \times \frac{1}{\text{Efficiency}}$$

Operating Horsepower used for new exhaust fans.

IMPLEMENTATION SUMMARY						
	EXISTING			PROPOSED		
TAG	MODEL	MOTOR (HP)	MOTOR EFFICIENCY	MODEL	OPERATING (HP)	MOTOR EFFICIENCY
EF-13	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-19	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-17	GB-141-7-X	3/4	73.5%	G-143-VG	0.74	85.0%
EF-21	GB-141-7-X	3/4	73.5%	G-143-VG	0.74	85.0%
EF-20	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-5	GB-071-6-X	1/6	47.0%	G-070-VG	0.02	85.0%
EF-11	GB-071-6-X	1/6	47.0%	G-070-VG	0.01	85.0%
EF-10	GB-091-4-X	1/4	52.5%	G-095-VG	0.12	85.0%
EF-2	GB-200-3-X	1/3	54.0%	G-143-VG	0.44	85.0%
EF-4	GB-200-3-X	1/3	54.0%	G-143-VG	0.44	85.0%
EF-1	GB-071-6-X	1/6	47.0%	G-085-VG	0.06	85.0%
EF-3	GB-071-6-X	1/6	47.0%	G-085-VG	0.06	85.0%
EF-23	GB-071-6-X	1/6	47.0%	G-097-VG	0.03	85.0%
TOTAL						

ENERGY SAVINGS CALCULATIONS				
TAG	**OPERATING HOURS**	**SAVINGS (KW)**	**SAVINGS (KWH)**	**COST SAVINGS**
EF-13	3,000	0.256	767	$112
EF-19	3,000	0.256	767	$112
EF-17	3,000	0.112	335	$49
EF-21	3,000	0.112	335	$49
EF-20	3,000	0.256	767	$112
EF-5	3,000	0.247	741	$108
EF-11	3,000	0.256	767	$112
EF-10	3,000	0.250	750	$110
EF-2	3,000	0.074	223	$33
EF-4	3,000	0.074	223	$33
EF-1	3,000	0.212	636	$93
EF-3	3,000	0.212	636	$93
EF-23	3,000	0.238	715	$104
TOTAL		2.555	7,662	$1,119

Energy Savings Summary:

ECM #6 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$14,470
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$14,470
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$1,119
Total Yearly Savings ($/Yr):	$1,119
Estimated ECM Lifetime (Yr):	15
Simple Payback	12.9
Simple Lifetime ROI	16%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$16,789
Internal Rate of Return (IRR)	2%
Net Present Value (NPV)	$2,319

ECM CR#7

Chestnut Ridge Exterior Door Replacement

Description:

There are approximately five older metal door and framed exterior doors located on the side entrances of the classroom wing and rear entrances by the cafeteria and gymnasium sections. These doors appeared to be poorly insulated and infiltration was occurring between the doors and the frame.

The installation of a new better insulated and tighter frame constructed door will reduce the heat loss caused by poor insulation and infiltration. Prior to installation district engineer/architect should verify all measurements and code requirements.

Energy Savings Calculations:

Thermal Loss values were calculated for each month based on the average monthly temperature obtained for July 2013 to June 2014. Cooling savings were not calculated for this measure as entry ways have heating only units at the doors and cooling losses would be minimal. Insulation and infiltrations values for the existing doors were estimated.

$$\text{Thermal Loss Savings (kBtu)} = (U_E - U_P) \times \text{Door Area} \times (T_{\text{Indoor}} - T_{\text{Avg Outdoor}}) \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{Btu}}$$

$$\text{Infiltration Loss (kBtu)} = \text{Door Area} \times \frac{\text{CFM}}{\text{SF}} \times (T_{\text{indoor}} - T_{\text{Avg Outdoor}}) \times 1.08 \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{But}}$$

$$\text{Heating Savings (Therm)} = \text{Thermal Loss Savings (Heating)} \times \frac{1}{\text{Efficiency}} \times \frac{1\ \text{Therm}}{100\ \text{kBtu}}$$

EXTERIOR DOOR REPLACEMENT CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
De scription:	Existing Metal Doors	New Insulated Doors	
Quantity of Doors	5	5	
Door Area (SF)	221	221	
R-Value (SF*°F/BTU/HR)	2.00	15.00	
Infiltration Rate (CFM/SF)	2.0	1.0	
Indoor Temperature Heating (°F)	70	70	
Average Thermal Loss Rate Heating (BTU/HR)	2,636	351	2,285
Heating Degree Days (65°F)	3743	3743	
Thermal Losses Heating (kBtu)	71,630	44,053	27,577
Heating System Efficiency (%)	78.0%	78.0%	
Natural Gas Cost ($/Therm)	$1.056	$1.056	-
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Natural Gas Usage (Therm)	918	565	354
Energy Cost Savings ($)	$969	$596	$374
Comments:	1. Proposed Infiltration Bas ed on ASHRAE 90.1 - 2007 2. Savings Bas ed on Avg. Monthly Temperature for Jul-13 to Jun-14		

Energy Savings Summary:

ECM #7 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$18,750
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$18,750
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$374
Total Yearly Savings ($/Yr):	$374
Estimated ECM Lifetime (Yr):	20
Simple Payback	50.2
Simple Lifetime ROI	-60%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$7,476
Internal Rate of Return (IRR)	-8%
Net Present Value (NPV)	($11,274)

ECM CR#8

Chestnut Ridge Lighting Upgrades (Interior & Exterior)

The majority of the interior lighting throughout the Chestnut Ridge Middle School is provided with fluorescent fixtures with older generation, 32W T8 lamps and electronic ballasts. Although these T8 lamps are considered fairly efficient, further energy savings can be achieved by replacing the existing T8 lamps with new generation, 800 series 28W T8 lamps without compromising light output. The Energy Audit recommends that these fixtures remain unmodified due to the extensive costs which will be incurred if these fixtures are to be re-lamped and re-ballasted, which results in a long payback period.

The ECM also includes replacement of any incandescent lamps with compact fluorescent lamps. Compact fluorescent lamps (CFL's) were designed to be direct replacements for the standard incandescent lamps which are common to table lamps, spot lights, hi-hats, bathroom vanity lighting, etc. The light output of the CFL has been designed to resemble the incandescent lamp. The color rendering index (CRI) of the CFL is much higher than standard fluorescent lighting, and therefore provides a much "truer" light. The CFL is available in a myriad of shapes and sizes depending on the specific application. Typical replacements are: a 13-Watt CFL for a 60-Watt incandescent lamp, an 18-Watt CFL for a 75-Watt incandescent lamp, and a 26-Watt CFL for a 100-Watt incandescent lamp. The CFL is also available for a number of "brightness colors" that is indicated by the Kelvin rating of the lamp. A 2700K CFL is the "warmest" color available and is closest in color to the incandescent lamp. CFL's are also available in 3000K, 3500K, and 4100K. The 4100K would be the "brightest" or "coolest" output. A CFL can be chosen to screw right into your existing fixtures, or hardwired into your existing fixtures. Where the existing fixture is controlled by a dimmer switch, the CFL bulb must be compatible with a dimmer switch. In some locations the bulb replacement will need to be tested to make sure the larger base of the CFL will fit into the existing fixture. The energy usage of an incandescent compared to a compact fluorescent approximately is 3 to 4 times greater. In addition to the energy savings, compact fluorescent fixtures burn-hours are 8 to 15 times longer than incandescent fixtures ranging from 6,000 to 15,000 burn-hours compared to incandescent fixtures ranging from 750 to 1000 burn-hours. However, the maintenance savings due to reduced lamp replacement is offset by the higher cost of the CFL's compared to the incandescent lamps.

The All Purpose room at the Chestnut Ridge Middle School is currently lit via 250 watt Metal Halide HID fixtures. The space would be better served with a more efficient, fluorescent lighting system. The ECM recommends upgrading the lighting to an energy-efficient T5 high output system that includes new four lamp, 54 watt high output fixtures.

This measure replaces the 250 watt HID MH fixtures with a well-designed T5 high output (HO) system. T5 High output fixtures with reflectors and wire guards will be required in order to meet the mandated 50 foot-candle average within the spaces.

For consistency, the district will use LED lighting, where applicable, instead of the T5 HO system recommended by the Energy Audit.

The exterior lighting at the Chestnut Ridge Middle School is currently lit via 100 watt high pressure sodium wall packs, 250 watt high pressure sodium pole mounted/wall mounted shoe box fixtures, and 100 watt high pressure sodium recessed fixtures. The exterior would be better served by the installation of a series of LED wall pack fixtures, LED flood light fixtures, and LED retrofit of existing shoe box/recessed fixtures in which it would not be cost effective to replace in their entirety.

This measure replaces the all exterior fixtures with lower wattage LED technologies.

Energy Savings Summary

ECM #8 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$35,990
NJ Smart Start Equipment Incentive ($):	$2,300
Net Installation Cost ($):	$33,690
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$5,106
Total Yearly Savings ($/Yr):	$5,106
Estimated ECM Lifetime (Yr):	10
Simple Payback	6.6
Simple Lifetime ROI	52%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$51,056
Internal Rate of Return (IRR)	8%
Net Present Value (NPV)	$17,366

ECM CR#9

Chestnut Ridge Lighting Controls / Occupancy Sensors

Some of the lights in Bunker Hill Middle School are left on unnecessarily. In many cases the lights are left on because of the inconvenience to manually switch lights off upon leaving the room or the lights were already on when a room is first occupied. This is common in rooms that are occupied for only short periods and only a few times per day. In some instances lights are left on due to the misconception that it is better to keep the lights on rather than to continuously switch lights on and off. Although increased switching reduces lamp life, the energy savings outweigh the lamp replacement costs. The payback timeframe for when to turn the lights off is approximately two minutes. If the lights are expected to be off for at least a two minute interval, then it pays to shut them off.

Lighting controls come in many forms. Sometimes an additional switch is adequate to provide reduced lighting levels when full light output is not needed. Occupancy sensors detect motion and will switch the lights on when the room is occupied. Occupancy sensors can either be mounted in place of a current wall switch, on the ceiling to cover large areas, or be wall mounted to cover large areas.

The U.S. Department of Energy sponsored a study to analyze energy savings achieved through various types of building system controls. The referenced savings is based on the "Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways," document posted for public use April 2005. The study has found that commercial buildings have the potential to achieve significant energy savings through the use of building controls. The average energy savings are as follows based on the report:

• Occupancy Sensors for Lighting Control 20% - 28% energy savings.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 20% of the total light energy controlled by occupancy sensors (The majority of the savings is expected to be after school hours when rooms are left with lights on)

This ECM includes installation of ceiling, wall, or switch mount sensors for individual offices, classrooms, large bathrooms, personal bathrooms, storage closets, etc. Sensors shall be manufactured by Sensorswitch, Watt Stopper or equivalent.

The calculations adjust the lighting power usage by the applicable percent savings for each area that includes lighting controls.

Energy Savings Calculations:

Energy Savings = (%Savings × Controlled Light Energy (kWh/Yr))

Savings = Energy Savings (kWh) x Ave Elec Cost ($/ kWh)

Rebates and Incentives:

From the **NJ Smart Start® Program Incentives Appendix**, the installation of a lighting control device warrants the following incentive:

Smart Start Incentive
= (# Wall mount sensors × $20 per sensor)
+ (# Ceiling mount sensors × $35 per sensor)

Energy Savings Summary:

ECM #9 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$63,440
NJ Smart Start Equipment Incentive ($):	$2,400
Net Installation Cost ($):	$61,040
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$3,946
Total Yearly Savings ($/Yr):	$3,946
Estimated ECM Lifetime (Yr):	15
Simple Payback	15.5
Simple Lifetime ROI	-3%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$59,187
Internal Rate of Return (IRR)	0%
Net Present Value (NPV)	($1,853)

ECM OV#1

Orchard Valley Vending Miser Controls

The Orchard Valley Middle School currently utilizes vending machines in select areas within the building. Vending machines are common within cafeteria's and faculty rooms which can be in use for a limited time during the day. The installation of the Vending Miser system will help reduce the operating hours of vending machines.

Cold beverage machines regularly operate inefficiently trying to maintain a constant cool temperature within the machine and snack machines with no cooling usually have lights that operate 24/7. The VendingMiser® system incorporates innovative energy-saving technology into a small plug-and-play device that in conjunction with a passive infrared sensor regulate the operation of the cold beverage and snack machines based on occupancy and room temperature. This ECM approximates the installation of five (5) of these control systems, one (1) for the snack machine and three (3) for the cold beverage machine.

Energy Savings Calculations:

Cold Drink and Snack Vending Machine Energy Conservation Project

Energy Analysis Prepared For:

Bunker Hill Middle School

www.VendingMiserStore.com

Input Variables	
Energy Costs ($0.000 per kwh)	$0.158
Facility Occupied Hours per Week	60
Number of Cold Drink, Vending Machines	3
Number of Uncooled Snack Machines	1
Power Requirements of Cold Drink Machine (avg. watts)	427
Power Requirements of Snack Machine (avg.	100
VendingMiser Sale Price (for cold drink machines)	$200.00
OfficeMiser Sale Price (for snack machines)	$100.00

Savings Analysis

	Before	After	
Cold Drink Machines	$1,774.18	$826.97	Cost of Operation
	11229	5234	kWh
		53%	% Energy Savings

Snack Machines	$138.09	$49.30	Cost of Operation
	874	312	kWh
		64%	% Energy Savings

Project Summary

Present kWh	Projected kWh	kWh Savings per Year
12103	5546	6557

Present Costs	Projected Costs	Annual Savings	Percent Savings	Total Project Cost	Break Even (Months)
$1,912.27	$876.27	$1,036.01	54%	$875.00	10.1

Energy Savings Summary:

ECM #1 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$875
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$875
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$1,036
Total Yearly Savings ($/Yr):	$1,036
Estimated ECM Lifetime (Yr):	10
Simple Payback	0.8
Simple Lifetime ROI	1084%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$10,360
Internal Rate of Return (IRR)	118%
Net Present Value (NPV)	$9,485

ECM OV#2

Orchard Valley Washing Machine Replacement

The Middle School has to standard top load clothes washer in the Custodial Closet by the boiler room. The installation of a newer Energy Star Rated high efficiency front load washer will not only reduce water and energy consumption due to washing and drying of clothes it will also reduce water heating costs.

The proposed replacement is a replacement with a similar sized front load machine that is Energy Star rated. The unit specified in this case is manufactured be GE model GFWN1100L.

Energy Savings Calculations:

Savings calculations are based on water consumption per load and electric consumption per load of the washer.

$$\text{Water Usage (gal)} = \frac{\text{Gallons}}{\text{Load}} \times \frac{\text{Loads}}{\text{year}}$$

$$\text{Water Heat (Btu)} = \text{Water Usage} \times 8.33\frac{\text{lbs}}{\text{gal}} \times c \times (110 - 50)\Delta T \times \text{Hot/Cold Mix (50\%)}$$

$$\text{Water Heat Energy (Fuel Units)} = \frac{\text{Water Heat (Btu)}}{\text{Heater Efficiency}} \times \frac{1}{\text{Fuel Conversion}}$$

$$\text{Washer Electric } \left(\frac{\text{kWh}}{\text{Load}}\right) = \text{Volts} \times \text{Amps} \times \text{Run Factor (50\%)} \times \frac{\text{kW}}{1000\,\text{W}} \times 1\frac{\text{hr}}{\text{load}}$$

ENERGY STAR CLOTHES WASHER CALCULATION			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Quantity of Units	1	1	
Manufacturer	Hot Point	GE	
Type	Top Load	Front Load	
Model	WLW3400SB	GFWN1100L	
Loads per Day	3	3	
Days Per Week	5	5	
Weeks Per Year	40	40	
Washer Usage kWh per Load	0.9	0.9	
Washer Usage Gallons per Load	31.4	14	17.4
Percent Hot / Cold Water Mix	0.5	0.5	
Water Heater Type	Gas	Gas	
Water Heater Efficiency	75%	75%	
Electric Rate ($/kWh)	$0.158	$0.158	
Natural Gas Rate ($/therm)	$1.117	$1.117	
Water Rate ($/1,000 Gal)	$6.500	$6.500	
ENERGY SAVINGS CALCULATIONS			
Electric Usage (kWh)	540	540	0
Natural Gas Usage (therm)	603	568	35
Water Usage (Gallons)	18,840	8,400	10,440
Energy Cost ($)	$881	$774	$107
COMMENTS:	Janitor's Closet Unit		

Energy Savings Summary:

ECM #2 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$940
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$940
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$107
Total Yearly Savings ($/Yr):	$107
Estimated ECM Lifetime (Yr):	10
Simple Payback	8.8
Simple Lifetime ROI	14%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$1,070
Internal Rate of Return (IRR)	2%
Net Present Value (NPV)	$130

ECM OV#3

Orchard Valley Walk-In Controls

The two refrigerated walk-in cooler/freezers have a bank of evaporator fans that circulate the cold air over and under the food. These banks of evaporator fans (~1/47 HP motors) run continuously and give off heat that must be removed by the refrigeration.

This measure would install an evaporator fan controller that features two-speed operation of the evaporator fans – high speed during cooling, and low speed or off when not cooling manufactured by Frigitek or equivalent.

Energy Savings Calculations:

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated with using existing equipment characteristics.

$$\text{kWh Savings Evap Fans} = \frac{\left(\text{Amps} \times \text{Volts} \times \text{Phase}^{\frac{1}{2}}\right)}{1000} \times 0.55 \times 8760 \times 35.52\%$$

$$\text{kWh Savings Evap Reduced Heat} = \text{kWh Savings Evap Fans} \times 0.28 \times 1.6$$

$$\text{kWh Savings Controls} = \frac{\text{Amps}_{CP} \times \text{Volts}_{CP} \times \text{Phase}_{CP}^{\frac{1}{2}}}{1000} \times 0.85 \times (35\% \times 2{,}195\ \text{Hrs} + 55\% \times 6{,}565\ \text{Hrs}) + \frac{\text{Amps}_{EP} \times \text{Volts}_{EP} \times \text{Phase}_{EP}^{\frac{1}{2}}}{1000} \times 0.55 \times 8760 \times 35.52\% \times 5\%$$

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	3	3	
Nameplate Amps of Evap Fan	0.6	0.6	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	3.8	3.8	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	3	3	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.158	$0.158	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Evaporator Fan Usage (KWH)	1,828	1,179	649
Evap Fan Heat Usage (KWH)	273	176	97
Compressor Usage (KWH)	5,635	5,353	282
Total Electric Usage (KWH)	7,736	6,708	1,028
Electric Cost ($)	$1,222	$1,060	$162
COMMENTS:	Walk-In Freezer		

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	2	2	
Nameplate Amps of Evap Fan	0.6	0.6	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	6.1	6.1	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	3	3	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.158	$0.158	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Evaporator Fan Usage (KWH)	1,219	786	433
Evap Fan Heat Usage (KWH)	273	176	97
Compressor Usage (KWH)	9,045	8,593	452
Total Electric Usage (KWH)	10,537	9,555	982
Electric Cost ($)	$1,665	$1,510	$155
COMMENTS:	Walk-In Refrigerator		

Energy Savings Summary:

ECM #3 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$2,940
NJ Smart Start Equipment Incentive ($):	$150
Net Installation Cost ($):	$2,790
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$318
Total Yearly Savings ($/Yr):	$318
Estimated ECM Lifetime (Yr):	10
Simple Payback	8.8
Simple Lifetime ROI	14%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$3,176
Internal Rate of Return (IRR)	2%
Net Present Value (NPV)	$386

ECM OV#4

Orchard Valley High Efficiency Transformer

Electrical distribution transformers play a key role in delivering electrical power to buildings as all the electrical power supplied to the building flows through them. Whether equipment is plugged in and turned on or not transformers continue to operate. Consider their impact on electricity consumption. Some transformers waste as much as 20% of billed electricity.

Older transformers in existing buildings may not have been built to meet the load requirements of today. Over the years electrical distribution has changed very little, however the connected equipment has changed dramatically. This dramatic change is derived from both the type of equipment (mostly electronic in nature) and the density of installed equipment. The impact of this change has had a direct impact on power quality and transformer efficiency.

When newer electronic equipment is introduced into buildings with older electrical systems power quality and transformer efficiency can suffer. According to a Department of Energy study performed in 1996 electronic equipment can increase losses by as much as 2.7 times. In real terms this would mean that a transformer that has a name- plate efficiency of 97% in reality is operating closer to 90% or lower. The difference represents additional costs to operate the transformer. Replacing your older transformers with Power smiths energy efficient E-Saver-C3 or T1000-C3 transformers can improve the reliability of your electronic equipment and significantly reduce electricity waste.

Power smith's energy efficient transformers have substantially lower losses (higher efficiency) than other transformers. These energy savings mean less kilowatt-hours (kWh) consumed and lower energy bills. Electricity demand charges also decline, thanks to reduced energy losses. These savings pay for the transformer many times over its installed life.

Energy Savings Summary:

ECM #4 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$62,500
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$62,500
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$7,895
Total Yearly Savings ($/Yr):	$7,895
Estimated ECM Lifetime (Yr):	20
Simple Payback	7.9
Simple Lifetime ROI	153%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$157,893
Internal Rate of Return (IRR)	11%
Net Present Value (NPV)	$95,393

ECM OV#5

Orchard Valley Exterior Door Replacement

Description:

There are approximately five older metal door and framed exterior doors located on the side entrances of the classroom wing and rear entrances by the cafeteria and gymnasium sections. These doors appeared to be poorly insulated and infiltration was occurring between the doors and the frame.

The installation of a new better insulated and tighter frame constructed door will reduce the heat loss caused by poor insulation and infiltration. Prior to installation district engineer/architect should verify all measurements and code requirements.

Energy Savings Calculations:

Thermal Loss values were calculated for each month based on the average monthly temperature obtained for July 2013 to June 2014. Cooling savings were not calculated for this measure as entry ways have heating only units at the doors and cooling losses would be minimal. Insulation and infiltrations values for the existing doors were estimated.

$$\text{Thermal Loss Savings (kBtu)} = (U_E - U_P) \times \text{Door Area} \times (T_{\text{Indoor}} - T_{\text{Avg Outdoor}}) \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{Btu}}$$

$$\text{Infiltration Loss (kBtu)} = \text{Door Area} \times \frac{\text{CFM}}{\text{SF}} \times (T_{\text{indoor}} - T_{\text{Avg Outdoor}}) \times 1.08 \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{But}}$$

$$\text{Heating Savings (Therm)} = \text{Thermal Loss Savings (Heating)} \times \frac{1}{\text{Efficiency}} \times \frac{1\ \text{Therm}}{100\ \text{kBtu}}$$

EXTERIOR DOOR REPLACEMENT CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
De scription:	Existing Metal Doors	New Insulated Doors	
Quantity of Doors	5	5	
Door Area (SF)	221	221	
R-Value (SF*°F/BTU/HR)	2.00	15.00	
Infiltration Rate (CFM/SF)	2.0	1.0	
Indoor Temperature Heating (°F)	70	70	
Average Thermal Loss Rate Heating (BTU/HR)	2,636	351	2,285
Heating Degree Days (65°F)	3743	3743	
Thermal Losses Heating (kBtu)	71,630	44,053	27,577
Heating System Efficiency (%)	78.0%	78.0%	
Natural Gas Cost ($/Therm)	$1.056	$1.056	-
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Natural Gas Usage (Therm)	918	565	354
Energy Cost Savings ($)	$969	$596	$374
Comments:	1. Proposed Infiltration Bas ed on ASHRAE 90.1 - 2007 2. Savings Bas ed on Avg. Monthly Temperature for Jul-13 to Jun-14		

Energy Savings Summary:

ECM #5 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$18,750
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$18,750
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$374
Total Yearly Savings ($/Yr):	$374
Estimated ECM Lifetime (Yr):	20
Simple Payback	50.2
Simple Lifetime ROI	-60%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$7,476
Internal Rate of Return (IRR)	-8%
Net Present Value (NPV)	($11,274)

ECM OV#6

Orchard Valley ECM Motor Exhaust Fans

Electronically Commutated Motors (ECM) are proven to generate substantial savings on small motor applications. These motors currently are available in sizes up to 1 horsepower, and provide efficiencies similar to how NEMA premium efficiency motor would at a large horsepower. The motor works much like a direct current (DC) motor and is without mechanical brushes and the commuter reduces friction losses in the motor. The motors are programmable and can be used for a wide range of applications.

This measure would replace this existing Greenheck roof exhaust fans with new direct drive varigreen exhaust fans with ECM motors.

Energy Savings Calculations:

Measured savings for ECM motors has proven that an approximately 65% reduction in power can be realized through the installation these motors.

$$\text{Electric Energy (kWh)} = 0.746\frac{\text{kW}}{\text{HP}} \times \text{HP}$$

$$\text{Electric Energy (kWh)} = 0.746\frac{\text{kW}}{\text{HP}} \times \text{HP} \times \text{Operating Hours} \times \frac{1}{\text{Efficiency}}$$

Operating Horsepower used for new exhaust fans.

IMPLEMENTATION SUMMARY						
	EXISTING			PROPOSED		
TAG	MODEL	MOTOR (HP)	MOTOR EFFICIENCY	MODEL	OPERATING (HP)	MOTOR EFFICIENCY
EF-11	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-5	GB-071-6-X	1/6	47.0%	G-070-VG	0.02	85.0%
EF-10	GB-091-4-X	1/4	52.5%	G-095-VG	0.12	85.0%
EF-9	GB-131-4-X	1/4	52.5%	G-103-VG	0.25	85.0%
EF-23	GB-071-6-X	1/6	47.0%	G-097-VG	0.03	85.0%
EF-19	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-21	GB-141-7-X	3/4	73.5%	G-143-VG	0.74	85.0%
EF-20	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-17	GB-141-7-X	3/4	73.5%	G-143-VG	0.74	85.0%
EF-13	GB-071-6-X	1/6	47.0%	G-060-VG	0.01	85.0%
EF-2	GB-200-3-X	1/3	54.0%	G-143-VG	0.44	85.0%
EF-4	GB-200-3-X	1/3	54.0%	G-143-VG	0.44	85.0%
EF-1	GB-071-6-X	1/6	47.0%	G-085-VG	0.06	85.0%
EF-3	GB-071-6-X	1/6	47.0%	G-085-VG	0.06	85.0%
TOTAL						

ENERGY SAVINGS CALCULATIONS				
TAG	OPERATING HOURS	SAVINGS (KW)	SAVINGS (KWH)	COST SAVINGS
EF-11	3,000	0.256	767	$121
EF-5	3,000	0.247	741	$117
EF-10	3,000	0.250	750	$119
EF-9	3,000	0.136	407	$64
EF-23	3,000	0.238	715	$113
EF-19	3,000	0.256	767	$121
EF-21	3,000	0.112	335	$53
EF-20	3,000	0.256	767	$121
EF-17	3,000	0.112	335	$53
EF-13	3,000	0.256	767	$121
EF-2	3,000	0.074	223	$35
EF-4	3,000	0.074	223	$35
EF-1	3,000	0.212	636	$101
EF-3	3,000	0.212	636	$101
TOTAL		2.690	8,070	$1,276

Energy Savings Summary:

ECM #6 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$16,250
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$16,250
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$1,276
Total Yearly Savings ($/Yr):	$1,276
Estimated ECM Lifetime (Yr):	15
Simple Payback	12.7
Simple Lifetime ROI	18%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$19,136
Internal Rate of Return (IRR)	2%
Net Present Value (NPV)	$2,886

ECM OV#7

Orchard Valley Lighting Upgrades (Interior & Exterior)

The majority of the interior lighting throughout the Orchard Valley Middle School is provided with fluorescent fixtures with older generation, 32W T8 lamps and electronic ballasts. Although these T8 lamps are considered fairly efficient, further energy savings can be achieved by replacing the existing T8 lamps with new generation, 800 series 28W T8 lamps without compromising light output. The Energy Audit recommends that these fixtures remain unmodified due to the extensive costs which will be incurred if these fixtures are to be re-lamped and re-ballasted, which results in a long payback period.

The ECM also includes replacement of any incandescent lamps with compact fluorescent lamps. Compact fluorescent lamps (CFL's) were designed to be direct replacements for the standard incandescent lamps which are common to table lamps, spot lights, hi-hats, bathroom vanity lighting, etc. The light output of the CFL has been designed to resemble the incandescent lamp. The color rendering index (CRI) of the CFL is much higher than standard fluorescent lighting, and therefore provides a much "truer" light. The CFL is available in a myriad of shapes and sizes depending on the specific application. Typical replacements are: a 13-Watt CFL for a 60-Watt incandescent lamp, an 18-Watt CFL for a 75-Watt incandescent lamp, and a 26-Watt CFL for a 100-Watt incandescent lamp. The CFL is also available for a number of "brightness colors" that is indicated by the Kelvin rating of the lamp. A 2700K CFL is the "warmest" color available and is closest in color to the incandescent lamp. CFL's are also available in 3000K, 3500K, and 4100K. The 4100K would be the "brightest" or "coolest" output. A CFL can be chosen to screw right into your existing fixtures, or hardwired into your existing fixtures. Where the existing fixture is controlled by a dimmer switch, the CFL bulb must be compatible with a dimmer switch. In some locations the bulb replacement will need to be tested to make sure the larger base of the CFL will fit into the existing fixture. The energy usage of an incandescent compared to a compact fluorescent approximately is 3 to 4 times greater. In addition to the energy savings, compact fluorescent fixtures burn-hours are 8 to 15 times longer than incandescent fixtures ranging from 6,000 to 15,000 burn-hours compared to incandescent fixtures ranging from 750 to 1000 burn-hours. However, the maintenance savings due to reduced lamp replacement is offset by the higher cost of the CFL's compared to the incandescent lamps.

The All Purpose room at the Orchard Valley Middle School is currently lit via 250 watt Metal Halide HID fixtures. The space would be better served with a more efficient, fluorescent lighting system. The ECM recommends upgrading the lighting to an energy-efficient T5 high output system that includes new four lamp, 54 watt high output fixtures.

This measure replaces the 250 watt HID MH fixtures with a well-designed T5 high output (HO) system. T5 High output fixtures with reflectors and wire guards will be required in order to meet the mandated 50 foot-candle average within the spaces.

For consistency, the district will use LED lighting, where applicable, instead of the T5 HO system recommended by the Energy Audit.

The exterior lighting at the Orchard Valley Middle School is currently lit via 100 watt high pressure sodium wall packs, 250 watt high pressure sodium pole mounted shoe box fixtures, 250 watt high pressure sodium pole mounted flood lights, and 100 watt high pressure sodium recessed fixtures. The exterior would be better served by the installation of a series of LED wall pack fixtures, LED flood light fixtures, and LED retrofit of existing shoe box/recessed fixtures in which it would not be cost effective to replace in their entirety.

This measure replaces the all exterior fixtures with lower wattage LED technologies.

Energy Savings Summary:

ECM #7 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$45,950
NJ Smart Start Equipment Incentive ($):	$3,200
Net Installation Cost ($):	$42,750
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$6,656
Total Yearly Savings ($/Yr):	$6,656
Estimated ECM Lifetime (Yr):	10
Simple Payback	6.4
Simple Lifetime ROI	56%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$66,562
Internal Rate of Return (IRR)	9%
Net Present Value (NPV)	$23,812

ECM OV#8

Orchard Valley Lighting Controls / Occupancy Sensors

Some of the lights in Orchard Valley Middle School are left on unnecessarily. In many cases the lights are left on because of the inconvenience to manually switch lights off upon leaving the room or the lights were already on when a room is first occupied. This is common in rooms that are occupied for only short periods and only a few times per day. In some instances lights are left on due to the misconception that it is better to keep the lights on rather than to continuously switch lights on and off. Although increased switching reduces lamp life, the energy savings outweigh the lamp replacement costs. The payback timeframe for when to turn the lights off is approximately two minutes. If the lights are expected to be off for at least a two minute interval, then it pays to shut them off.

Lighting controls come in many forms. Sometimes an additional switch is adequate to provide reduced lighting levels when full light output is not needed. Occupancy sensors detect motion and will switch the lights on when the room is occupied. Occupancy sensors can either be mounted in place of a current wall switch, on the ceiling to cover large areas, or be wall mounted to cover large areas.

The U.S. Department of Energy sponsored a study to analyze energy savings achieved through various types of building system controls. The referenced savings is based on the "Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways," document posted for public use April 2005. The study has found that commercial buildings have the potential to achieve significant energy savings through the use of building controls. The average energy savings are as follows based on the report:

• Occupancy Sensors for Lighting Control 20% - 28% energy savings.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 20% of the total light energy controlled by occupancy sensors (The majority of the savings is expected to be after school hours when rooms are left with lights on)

This ECM includes installation of ceiling, wall, or switch mount sensors for individual offices, classrooms, large bathrooms, personal bathrooms, storage closets, etc. Sensors shall be manufactured by Sensorswitch, Watt Stopper or equivalent.

The calculations adjust the lighting power usage by the applicable percent savings for each area that includes lighting controls.

Energy Savings Calculations:

Energy Savings = (%Savings × Controlled Light Energy (kWh/Yr))

Savings = Energy Savings (kWh) x Ave Elec Cost ($/ kWh)

Rebates and Incentives:

From the **NJ Smart Start® Program Incentives Appendix**, the installation of a lighting control device warrants the following incentive:

Smart Start Incentive
= (# Wall mount sensors × $20 per sensor)
+ (# Ceiling mount sensors × $35 per sensor)

Energy Savings Summary:

ECM #7 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$65,050
NJ Smart Start Equipment Incentive ($):	$2,460
Net Installation Cost ($):	$62,590
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$4,780
Total Yearly Savings ($/Yr):	$4,780
Estimated ECM Lifetime (Yr):	15
Simple Payback	13.1
Simple Lifetime ROI	15%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$71,707
Internal Rate of Return (IRR)	2%
Net Present Value (NPV)	$9,117

ECM BE#1

Bells Lighting Upgrades

ECM#1: Install seven (7) new CFL fixtures

On the day of the site visit, SWA completed a lighting inventory of the Bells Elementary School (see Appendix B). The existing lighting inventory contained a total of seven inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $220
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$220	1,034	0.0	0	0.1	$0	$172	5	$858	1.3	290%	58%	73%	$638	1,851

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, High School not eligible for Direct Install Program due to demand volume

ECM BE#2

Bells Occupancy Sensors

ECM#2: Install (19) new occupancy sensors

On the days of the site visits, SWA completed a lighting inventory of Bells Elementary School (see Appendix B). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:
Estimated installed cost: $4,480
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$4,100	3,257	1.0	0	0.2	$0	$541	10	$5,407	7.6	32%	3%	5%	$1,307	5,832

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
    - Maximum Incentive Amount: $380.

• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Bells Elementary not eligible for Direct Install Program due to demand volume

ECM BI#1 thru BI#3

Birches Lighting Upgrades

ECM #1: Replace 7 incandescent lamps with CFLs

On the day of the site visit, SWA completed a lighting inventory of the Birches Elementary School (see Appendix C). The existing lighting inventory contained a total of seven inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $220
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$220	1,034	0.0	0	0.1	$0	$154	5	$770	1.4	250%	50%	64%	$550	1,851

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Birches Elementary not eligible for Direct Install Program due to demand volume

ECM #2: Replace existing high bay metal halide lighting fixtures with fifteen new LED fixtures

On the day of the site visit, SWA completed a lighting inventory of Birches Elementary School (see Appendix C). The gymnasium lighting consists of standard probe start Metal Halide (MH) lamps. SWA recommends replacing the interior higher wattage MH fixtures with LED lamps which offer better performance characteristics. They produce higher light output both initially and over time, operate more efficiently, produce whiter light, last much longer and turn on and re-strike faster. Due to these characteristics, energy savings can be realized via one-to-one substitution of lower-wattage systems, or by taking advantage of higher light output and reducing the number of fixtures required in the space. Additionally, because of the higher light output the gymnasium may require less fixtures, thus reducing the initial cost and improving the simple payback compared to the numbers below. The labor for the recommended installations is assumed to be performed by in-house electricians.

*It is important to note that further savings maybe achieved if the number of fixtures can be reduced based on the light quality of the LED fixtures. Washington Township Board of Education removed 15 MH light fixtures in a similar-sized gym at Hurffville Elementary School and were able to install only 9 LED fixtures and achieve the same light quality. All costs and associated analysis based on utilizing LED replacements.

Installation cost:

Estimated installed cost: $11,370
Source of cost estimate: Washington Township BOE previous lighting retrofit

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$11,370	4,483	2.1	0	0.2	$0	$668	10	$6,685	17.0	-41%	-4%	-9%	-$4,685	8,027

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Birches Elementary not eligible for Direct Install Program due to demand volume

ECM #3: Replace 1 old LED Exit Signs with Newer LED Exit Sign

During the field audit, SWA completed a building lighting inventory (see Appendix C). SWA observed that the building contains a number of old LED Exit signs. SWA recommends replacing these with newer low wattage LED types. Replacing existing Exit signs with newer LED Exit signs can result in lower kilowatt-hour consumption, as well as lower maintenance costs. Since Exit signs operate 24 hours per day, they can consume large amounts of energy. In addition, older Exit signs require frequent maintenance due to the short life span of the lamps that light them. LED Exit signs last at least 5 years. In addition, LED Exit signs offer better fire code compliance because they are maintenance free in excess of 10 years. LED Exit signs are usually brighter than comparable incandescent or fluorescent signs, and have a greater contrast with their background due to the monochromatic nature of the light that LEDs emit. The building owner may decide to perform this work with in-house resources from the Maintenance Department on a scheduled, longer timeline than otherwise performed by a contractor.

Installation cost:

Estimated installed cost: $300
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$300	1,927	0.1	0	0.1	$0	$287	15	$4,307	1.0	1336%	89%	96%	$4,007	3,450

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, Birches Elementary not eligible for Direct Install Program due to demand volume

ECM BI#4

Birches Occupancy Sensors

ECM #4: Install 20 new occupancy sensors

On the days of the site visits, SWA completed a lighting inventory of Birches Elementary School (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:
Estimated installed cost: $4,700
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$4,300	2,824	1.0	0	0.2	$0	$421	10	$4,210	10.2	-2%	0%	0%	-$90	5,056

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
  - Maximum Incentive Amount: $400.
• NJ Clean Energy – Direct Install (Up to 70% of installed costs) Incentive listed in Energy Audit however, Birches Elementary not eligible for Direct Install Program due to demand volume

ECM HU#1 thru HU#3

Hurffville Lighting Upgrades

ECM #1: Replace 23 incandescent lamps with CFLs

On the day of the site visit, SWA completed a lighting inventory of the Hurffville Elementary School (see Appendix C). The existing lighting inventory contained a total of 23 inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $660
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$660	2,786	0.0	0	0.1	$0	$421	5	$2,103	1.6	219%	44%	57%	$1,443	4,988

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Hurffville Elementary not eligible for Direct Install Program due to demand volume

ECM #2: Replace 6 incandescent exit signs with new LED exit signs

On the day of the site visit, SWA completed a lighting inventory of Hurffville Elementary School (see Appendix C). In total, 6 incandescent exit signs were found. Exit signs present a favorable opportunity for cost savings since they are operated 24 hours per day. Newer LED exit signs are available in wattages as low as 5W.

Installation cost:

Estimated installed cost: $1,280
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$1,280	1,726	0.0	0	0.1	$0	$261	10	$2,606	4.9	104%	10%	16%	$1,326	3,090

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

- NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Hurffville Elementary not eligible for Direct Install Program due to demand volume

ECM #3: Replace 6 high bay metal halide lighting fixtures with LED fixtures

On the day of the site visit, SWA completed a lighting inventory of Hurffville Elementary School (see Appendix C). The All-Purpose Room lighting consists of standard probe start 250W Metal Halide (MH) lamps. SWA recommends replacing the interior higher wattage MH fixtures with LED lamps which offer better performance characteristics. They produce higher light output both initially and over time, operate more efficiently, produce whiter light, last much longer and turn on and re-strike faster. Due to these characteristics, energy savings can be realized via one-to-one substitution of lower-wattage systems, or by taking advantage of higher light output and reducing the number of fixtures required in the space.

*Washington Township Board of Education replaced metal halide fixtures in the gymnasium of Hurffville Elementary School already with LED fixtures and it is recommended that the same fixtures are used in the All-Purpose Room. All costs and associated analysis based on utilizing LED replacements.

Installation cost:
Estimated installed cost: $4,750
Source of cost estimate: Washington Township BOE previous lighting retrofit

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$4,750	1,793	0.0	0	0.1	$0	$271	10	$2,707	16.4	-39%	-4%	-9%	$-2,043	3,210

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
- NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Hurffville Elementary not eligible for Direct Install Program due to demand volume

ECM HU#4

Hurffville Occupancy Sensors

ECM #4: Install 27 new occupancy sensors

On the days of the site visits, SWA completed a lighting inventory of Hurffville Elementary School (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:
Estimated installed cost: $6,290
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$5,750	4,241	2.0	0	0.2	$0	$641	10	$6,409	9.0	11%	1%	2%	$659	7,594

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
  - Maximum Incentive Amount: $540.
• NJ Clean Energy – Direct Install (Up to 70% of installed costs) Incentive listed in Energy Audit however, Hurffville Elementary not eligible for Direct Install Program due to demand volume

ECM TJ#1

Thomas Jefferson Lighting Upgrades

The majority of the interior lighting throughout the Thomas Jefferson Elementary School is provided with fluorescent fixtures with older generation, 32W T8 lamps and electronic ballasts. Although these T8 lamps are considered fairly efficient, further energy savings can be achieved by replacing the existing T8 lamps with new generation, 800 series 28W T8 lamps without compromising light output. The Energy Audit recommends that these fixtures remain unmodified due to the extensive costs which will be incurred if these fixtures are to be re-lamped and re-ballasted, which results in a long payback period.

The ECM also includes replacement of any incandescent lamps with compact fluorescent lamps. Compact fluorescent lamps (CFL's) were designed to be direct replacements for the standard incandescent lamps which are common to table lamps, spot lights, hi-hats, bathroom vanity lighting, etc. The light output of the CFL has been designed to resemble the incandescent lamp. The color rendering index (CRI) of the CFL is much higher than standard fluorescent lighting, and therefore provides a much "truer" light. The CFL is available in a myriad of shapes and sizes depending on the specific application. Typical replacements are: a 13-Watt CFL for a 60-Watt incandescent lamp, an 18-Watt CFL for a 75-Watt incandescent lamp, and a 26-Watt CFL for a 100-Watt incandescent lamp. The CFL is also available for a number of "brightness colors" that is indicated by the Kelvin rating of the lamp. A 2700K CFL is the "warmest" color available and is closest in color to the incandescent lamp. CFL's are also available in 3000K, 3500K, and 4100K. The 4100K would be the "brightest" or "coolest" output. A CFL can be chosen to screw right into your existing fixtures, or hardwired into your existing fixtures. Where the existing fixture is controlled by a dimmer switch, the CFL bulb must be compatible with a dimmer switch. In some locations the bulb replacement will need to be tested to make sure the larger base of the CFL will fit into the existing fixture. The energy usage of an incandescent compared to a compact fluorescent approximately is 3 to 4 times greater. In addition to the energy savings, compact fluorescent fixtures burn-hours are 8 to 15 times longer than incandescent fixtures ranging from 6,000 to 15,000 burn-hours compared to incandescent fixtures ranging from 750 to 1000 burn-hours. However, the maintenance savings due to reduced lamp replacement is offset by the higher cost of the CFL's compared to the incandescent lamps.

The All Purpose room at the Thomas Jefferson Elementary School is currently lit via 250 watt Metal Halide HID fixtures. The space would be better served with a more efficient, fluorescent lighting system. The ECM recommends upgrading the lighting to an energy-efficient T5 high output system that includes new four lamp, 54 watt high output fixtures.

This measure replaces the 250 watt HID MH fixtures with a well-designed T5 high output (HO) system. T5 High output fixtures with reflectors and wire guards will be required in order to meet the mandated 50 foot-candle average within the spaces.

For consistency, the district will use LED lighting, where applicable, instead of the T5 HO system recommended by the Energy Audit.

The exterior lighting at the Thomas Jefferson Elementary School is currently lit via 100 watt high pressure sodium wall packs, 250 watt high pressure sodium pole/wall mounted shoe box fixtures, 250 watt high pressure sodium pole mounted flood lights, and incandescent 60 watt recessed fixtures.

The exterior would be better served by the installation of a series of LED wall pack fixtures, LED flood light fixture, LED retrofit of existing shoe box fixtures, and re-lamp of incandescent lamps with compact fluorescent equivalents where it would not be cost effective to replace in their entirety.

This measure replaces the all exterior fixtures with lower wattage LED technologies and compact fluorescent lamps.

ECM #1 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$16,360
NJ Smart Start Equipment Incentive ($):	$1,400
Net Installation Cost ($):	$14,960
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$2,897
Total Yearly Savings ($/Yr):	$2,897
Estimated ECM Lifetime (Yr):	10
Simple Payback	5.2
Simple Lifetime ROI	94%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$28,968
Internal Rate of Return (IRR)	14%
Net Present Value (NPV)	$14,008

ECM TJ#2

Thomas Jefferson Lighting Controls / Occupancy Sensors

Some of the lights in Thomas Jefferson Elementary School are left on unnecessarily. In many cases the lights are left on because of the inconvenience to manually switch lights off upon leaving the room or the lights were already on when a room is first occupied. This is common in rooms that are occupied for only short periods and only a few times per day. In some instances lights are left on due to the misconception that it is better to keep the lights on rather than to continuously switch lights on and off. Although increased switching reduces lamp life, the energy savings outweigh the lamp replacement costs. The payback timeframe for when to turn the lights off is approximately two minutes. If the lights are expected to be off for at least a two minute interval, then it pays to shut them off.

Lighting controls come in many forms. Sometimes an additional switch is adequate to provide reduced lighting levels when full light output is not needed. Occupancy sensors detect motion and will switch the lights on when the room is occupied. Occupancy sensors can either be mounted in place of a current wall switch, on the ceiling to cover large areas, or be wall mounted to cover large areas.

The U.S. Department of Energy sponsored a study to analyze energy savings achieved through various types of building system controls. The referenced savings is based on the "Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways," document posted for public use April 2005. The study has found that commercial buildings have the potential to achieve significant energy savings through the use of building controls. The average energy savings are as follows based on the report:

• Occupancy Sensors for Lighting Control 20% - 28% energy savings.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 20% of the total light energy controlled by occupancy sensors (The majority of the savings is expected to be after school hours when rooms are left with lights on)

This ECM includes installation of ceiling, wall, or switch mount sensors for individual offices, classrooms, large bathrooms, personal bathrooms, storage closets, etc. Sensors shall be manufactured by Sensorswitch, Watt Stopper or equivalent.

The calculations adjust the lighting power usage by the applicable percent savings for each area that includes lighting controls.

Energy Savings Calculations:
Energy Savings = (%Savings × Controlled Light Energy (kWh/Yr))

Savings = Energy Savings (kWh) x Ave Elec Cost ($/ kWh)

Rebates and Incentives:

From the **NJ Smart Start® Program Incentives Appendix**, the installation of a lighting control device warrants the following incentive:

Smart Start Incentive
= (# Wall mount sensors × $20 per sensor)
+ (# Ceiling mount sensors × $35 per sensor)

ECM #2 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$31,000
NJ Smart Start Equipment Incentive ($):	$1,405
Net Installation Cost ($):	$29,595
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$2,617
Total Yearly Savings ($/Yr):	$2,617
Estimated ECM Lifetime (Yr):	10
Simple Payback	11.3
Simple Lifetime ROI	-12%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$26,169
Internal Rate of Return (IRR)	-2%
Net Present Value (NPV)	($3,426)

ECM TJ#3

Thomas Jefferson Replace Gym, Café & Stage with DX/Gas RTU

The Cafeteria and Gymnasium are conditioned by two split system indoor air handlers with rooftop condensing units and electric heating coils. These units are well past their useful life and in need of replacement. The Stage is conditioned by a Carrier 2 ton cooling only rooftop unit with electric heat downstream of the unit.

By converting these units over to gas heat the operating costs for these units can be substantially reduced. The building currently has a 5 PSI gas meter located with ~1" buried line on the outside the main electrical room. This measure will require the meter replaced and increased in capacity in order to accommodate the new rooftop units, based on availability determined by the utility company. The basis of design for this measure was Carrier rooftop unit models Weathermaker 48A and Infinity 48XLA.

Energy Savings Calculations:

According to the New Jersey Clean Energy Program, Protocols to Measure Resource Savings, dated August 2012, the heat pump algorithms are as follows:

Heating Usage

$$\text{Usage (kBtu)} = \text{Capacity} \times 0.8 \times 10 \text{ hrs} \times \text{HDD} \times \frac{1}{(65-13)\text{F}}$$

$$\text{Fuel Usage} = \text{Usage (kBtu)} \times \frac{1}{\text{Sys \% Eff}} \times \text{Fuel Conversion Factor}$$

Cooling Usage

$$Usage\ (kWh) = \frac{Capacity\ (\frac{Btu}{h})}{1000} \times EFLH \times \frac{1}{EER}$$

Stage 2-Ton Unit:

CONVERSION TO DX/GAS ROOFTOP UNIT			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Quantity of Units	1	1	
Unit Cooling Capacity (Btu/h)	24,000	24,000	
Unit Electric Heating Capacity (kW)	7.5	-	
Unit Gas Heating Capacity (MBH)	-	40.0	
HEATING SAVINGS CALCULATION			
Unit Capacity (Btu/h)	25,590.0	40,000.0	
Heating System Efficiency	100%	78%	
Heating Degree Days (65 F)	3,743	3,743	
Electric Usage (kWh)	4,404	0	4,404
Natural Gas Usage (therm)	0	301	-301
COOLING SAVINGS CALCULATION			
Cooling Efficiency (SEER)	10	15.5	
Cooling Equivalent Full Load Hours	1,131	1,131	
Electric Usage (kWh)	2,714	1,751	963
Electric Cost ($/kWh)	$0.140	$0.140	
Natural Gas Cost ($/therm)	$1.00	$1.00	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Electric Usage (kWh)	7,118	1,751	5,367
Natural Gas Usage (therm)	0	301	-301
Energy Cost ($)	$997	$546	$450
COMMENTS:	HDD Adjusted for Use Type. Stage Unit		

Cafeteria 30 ton Unit

CONVERSION TO DX/GAS ROOFTOP UNIT			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Quantity of Units	1	1	
Unit Cooling Capacity (Btu/h)	360,000	360,000	
Unit Electric Heating Capacity (kW)	180.0	-	
Unit Gas Heating Capacity (MBH)	-	525.0	
HEATING SAVINGS CALCULATION			
Unit Capacity (Btu/h)	614,160.0	525,000.0	
Heating System Efficiency	100%	81%	
Heating Degree Days (65 F)	3,743	3,743	
Electric Usage (kWh)	105,685	0	105,685
Natural Gas Usage (therm)	0	3,806	-3,806
COOLING SAVINGS CALCULATION			
Cooling Efficiency (EER)	7	10.5	
Cooling Equivalent Full Load Hours	1,131	1,131	
Electric Usage (kWh)	58,166	38,777	19,389
Electric Cost ($/kWh)	$0.140	$0.140	
Natural Gas Cost ($/therm)	$1.00	$1.00	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Electric Usage (kWh)	163,850	38,777	125,073
Natural Gas Usage (therm)	0	3,806	-3,806
Energy Cost ($)	$22,939	$9,235	$13,704
COMMENTS:	HDD Adjusted for Use Type.		

Gymnasium 40 ton Unit

CONVERSION TO DX/GAS ROOFTOP UNIT			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Quantity of Units	1	1	
Unit Cooling Capacity (Btu/h)	480,000	480,000	
Unit Electric Heating Capacity (kW)	180.0	-	
Unit Gas Heating Capacity (MBH)	-	600.0	
HEATING SAVINGS CALCULATION			
Unit Capacity (Btu/h)	614,160.0	800,000.0	
Heating System Efficiency	100%	81%	
Heating Degree Days (65 F)	3,743	3,743	
Electric Usage (kWh)	105,685	0	105,685
Natural Gas Usage (therm)	0	5,799	-5,799
COOLING SAVINGS CALCULATION			
Cooling Efficiency (EER)	7	10	
Cooling Equivalent Full Load Hours	1,131	1,131	
Electric Usage (kWh)	77,554	54,288	23,266
Electric Cost ($/kWh)	$0.140	$0.140	
Natural Gas Cost ($/therm)	$1.00	$1.00	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Electric Usage (kWh)	183,239	54,288	128,951
Natural Gas Usage (therm)	0	5,799	-5,799
Energy Cost ($)	$25,653	$13,399	$12,254
COMMENTS:	HDD Adjusted for Use Type.		

ECM #3 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$495,300
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$495,300
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$26,415
Total Yearly Savings ($/Yr):	$26,415
Estimated ECM Lifetime (Yr):	15
Simple Payback	18.8
Simple Lifetime ROI	-20%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$396,224
Internal Rate of Return (IRR)	-3%
Net Present Value (NPV)	($99,076)

ECM TJ#4

Thomas Jefferson High Efficiency Gas Domestic Boiler

The Thomas Jefferson Elementary school has two electric hot water boilers, one of which is located in the main electrical room and the other in a janitorial closet in the 1st grade hall. The unit located in the electrical room is rated for 120 kilowatts and is the larger of two units. It is recommended that this unit be replaced due to its proximity to an outside wall for venting and combustion air, and the existing gas line.

This ECM would replace the existing PK boiler with a Bradford and White EF series high efficiency natural gas fired boiler. Included in the installation is all required piping and venting.

This ECM assumes adequate gas pressure exists or can be obtained from the gas company.

Energy Savings Calculations:

Energy Density for "Education" type building = 5.2 kBtu / SF / year
2/3 of building area was used based on size comparison of two heaters.

$$\text{DHW Heat Usage} = \text{Energy Density}\left(\frac{\text{kBtu yr}}{\text{SF}}\right) \times \text{Building Square Footage (SF)}$$

$$\text{DHW Total Usage} = \frac{\text{Dom HW Heat Cons.(Btu)}}{\text{Heating Eff.(\%)} \times \text{Fuel Heat Value}\left(\frac{\text{BTU}}{\text{Fuel Unit}}\right)}$$

$$\text{Energy Cost} = \text{Heating Fuel Usage(Fuel Units)} \times \text{Ave Fuel Cost}\left(\frac{\$}{\text{Fuel Unit}}\right)$$

CONDENSING DOM. HOT WATER HEATER CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	Existing Hot Water Heater	Bradford White High Efficiency	
Building Type	Education Building		
Building Square-foot	48,457	48,457	
Domestic Water Usage, kBtu	251,974.67	251,974.67	
DHW Heating Fuel Type	Electric	Gas	
Heating Efficiency	95%	93%	-2%
Total Usage (kBTU)	265,236	270,941	-5,704
Electric Cost ($/kWh)	$0.140	$0.140	
Nat Gas Cost ($/Therm)	$1.00	$1.00	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Electric Usage (kWh)	77,714	0	77,714
Natural Gas Usage (Therms)	0	2,709	-2,709
Energy Cost ($)	$10,880	$2,709	$8,171
COMMENTS:	Savings are based on Energy Information Administration Commercial Building Energy Consumption Survey 2003 Information		

Energy Savings Summary:

ECM #4 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$33,125
NJ Smart Start Equipment Incentive ($):	$500
Net Installation Cost ($):	$32,625
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$8,171
Total Yearly Savings ($/Yr):	$8,171
Estimated ECM Lifetime (Yr):	15
Simple Payback	4.0
Simple Lifetime ROI	276%
Simple Lifetime Maintenance Savings	0
Simple Lifetime Savings	$122,564
Internal Rate of Return (IRR)	24%
Net Present Value (NPV)	$89,939

ECM TJ#5

Thomas Jefferson High Efficiency Transformer

Electrical distribution transformers play a key role in delivering electrical power to buildings as all the electrical power supplied to the building flows through them. Whether equipment is plugged in and turned on or not transformers continue to operate. Consider their impact on electricity consumption. Some transformers waste as much as 20% of billed electricity.

Older transformers in existing buildings may not have been built to meet the load requirements of today. Over the years electrical distribution has changed very little, however the connected equipment has changed dramatically. This dramatic change is derived from both the type of equipment (mostly electronic in nature) and the density of installed equipment. The impact of this change has had a direct impact on power quality and transformer efficiency.

When newer electronic equipment is introduced into buildings with older electrical systems power quality and transformer efficiency can suffer. According to a Department of Energy study performed in 1996 electronic equipment can increase losses by as much as 2.7 times. In real terms this would mean that a transformer that has a name- plate efficiency of 97% in reality is operating closer to 90% or lower. The difference represents additional costs to operate the transformer. Replacing your older transformers with Power smiths energy efficient E-Saver-C3 or T1000-C3 transformers can improve the reliability of your electronic equipment and significantly reduce electricity waste.

Power smith’s energy efficient transformers have substantially lower losses (higher efficiency) than other transformers. These energy savings mean less kilowatt-hours (kWh) consumed and lower energy bills. Electricity demand charges also decline, thanks to reduced energy losses. These savings pay for the transformer many times over its installed life.

Energy Savings Summary:

ECM #5 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$90,000
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$90,000
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$7,093
Total Yearly Savings ($/Yr):	$7,093
Estimated ECM Lifetime (Yr):	25
Simple Payback	12.7
Simple Lifetime ROI	97%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$177,319
Internal Rate of Return (IRR)	6%
Net Present Value (NPV)	$87,319

ECM TJ#6

Thomas Jefferson Walk-In Controls

The two refrigerated walk-in cooler/freezers have a bank of evaporator fans that circulate the cold air over and under the food. These banks of evaporator fans (~1/47 HP motors) run continuously and give off heat that must be removed by the refrigeration.

This measure would install an evaporator fan controller that features two-speed operation of the evaporator fans – high speed during cooling, and low speed or off when not cooling manufactured by Frigitek or equivalent.

Energy Savings Calculations:

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated with using existing equipment characteristics.

$$\text{kWh Savings Evap Fans} = \frac{\left(\text{Amps} \times \text{Volts} \times \text{Phase}^{\frac{1}{2}}\right)}{1000} \times 0.55 \times 8760 \times 35.52\%$$

$$\text{kWh Savings Evap Reduced Heat} = \text{kWh Savings Evap Fans} \times 0.28 \times 1.6$$

$$\text{kWh Savings Controls} = \frac{\text{Amps}_{CP} \times \text{Volts}_{CP} \times \text{Phase}_{CP}^{\frac{1}{2}}}{1000} \times 0.85 \times (35\% \times 2{,}195 \text{ Hrs} + 55\% \times 6{,}565 \text{ Hrs}) + \frac{\text{Amps}_{EF} \times \text{Volts}_{EF} \times \text{Phase}_{EF}^{\frac{1}{2}}}{1000} \times 0.55 \times 8760 \times 35.52\% \times 5\%$$

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	3	3	
Nameplate Amps of Evap Fan	0.6	0.6	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	3.8	3.8	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	3	3	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.140	$0.140	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Evaporator Fan Usage (KWH)	1,828	1,179	649
Evap Fan Heat Usage (KWH)	273	176	97
Compressor Usage (KWH)	5,635	5,353	282
Total Electric Usage (KWH)	7,736	6,708	1,028
Electric Cost ($)	$1,083	$939	$144
COMMENTS:	Walk-In Freezer		

WALK-IN COOLER/FREEZER EVAPORATOR FAN CONTROL			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
ECM INPUTS	No Controller	Frigitek Controller	
Qty of Evaporator Fans	2	2	
Nameplate Amps of Evap Fan	0.6	0.6	
Nameplate Volts of Evap Fan	230	230	
Phase of Evap Fan	1	1	
Evap Fan Motor Power Factor	0.55	0.55	
Conversion from kW to tons (Refrigeration)	0.28	0.28	
Efficiency of Typical Refrigeration System (kW/ton)	1.6	1.6	
Nameplate Amps of Compressor	6.1	6.1	
Nameplate Volts of Compressor	230	230	
Phase of Compressor	3	3	
Compressor Power Factor	0.85	0.85	
Winter Compressor Duty Cycle	0.35	0.35	
Winter Compressor Op. Hours	2,195	2,195	
Non-Winter Compressor Duty Cycle	0.55	0.55	
Non-Winter Compressor Op. Hours	6,565	6,565	
Elec Cost ($/kWh)	$0.140	$0.140	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Evaporator Fan Usage (KWH)	1,219	786	433
Evap Fan Heat Usage (KWH)	273	176	97
Compressor Usage (KWH)	9,045	8,593	452
Total Electric Usage (KWH)	10,537	9,555	982
Electric Cost ($)	$1,475	$1,338	$137
COMMENTS:	Walk-In Refrigerator		

Energy Savings Summary:

ECM #6 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$2,950
NJ Smart Start Equipment Incentive ($):	$150
Net Installation Cost ($):	$2,800
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$281
Total Yearly Savings ($/Yr):	$281
Estimated ECM Lifetime (Yr):	15
Simple Payback	10.0
Simple Lifetime ROI	51%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$4,221
Internal Rate of Return (IRR)	6%
Net Present Value (NPV)	$1,421

ECM TJ#7

Thomas Jefferson Exterior Door Replacement

Description:

There are approximately four older metal door and framed exterior doors located on the side entrances of the classroom wing. These doors appeared to be poorly insulated and infiltration was occurring between the doors and the frame.

The installation of a new better insulated and tighter frame constructed door will reduce the heat loss caused by poor insulation and infiltration. Prior to installation district engineer/architect should verify all measurements and code requirements.

Energy Savings Calculations:

Thermal Loss values were calculated for each month based on the average monthly temperature obtained for September 2011 to August 2012. Cooling savings were not calculated for this measure as entry ways have heating only units at the doors and cooling losses would be minimal.

$$\text{Thermal Loss Savings (kBtu)} = (U_E - U_P) \times \text{Door Area} \times (T_{\text{Indoor}} - T_{\text{Avg Outdoor}}) \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{Btu}}$$

$$\text{Infiltration Loss (kBtu)} = \text{Door Area} \times \frac{\text{CFM}}{\text{SF}} \times (T_{\text{indoor}} - T_{\text{Avg Outdoor}}) \times 1.08 \times \frac{\text{Hours}}{\text{Month}} \times \frac{1\ \text{kBtu}}{1{,}000\ \text{But}}$$

$$\text{Heating Savings (Therm)} = \text{Thermal Loss Savings (Heating)} \times \frac{1}{\text{Efficiency}} \times \frac{1\ \text{Therm}}{100\ \text{kBtu}}$$

EXTERIOR DOOR REPLACEMENT CALCULATIONS			
ECM INPUTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Description:	Existing Metal Doors	New Insulated Doors	
Quantity of Doors	4	4	
Door Area (SF)	177	177	
R-Value (SF*°F/BTU/HR)	2.00	15.00	
Infiltration Rate (CFM/SF)	2.0	1.0	
Indoor Temperature Heating (°F)	70	70	
Average Thermal Loss Rate Heating (BTU/HR)	2,112	282	1,831
Heating Degree Days (65°F)	3743	3743	
Thermal Losses Heating (kBtu)	57,395	35,299	22,097
Heating System Efficiency (%)	100.0%	100.0%	
Electric Cost ($/kWh)	$0.140	$0.140	-
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	**EXISTING**	**PROPOSED**	**SAVINGS**
Electric Usage (kWh)	16,822	10,346	6,476
Energy Cost Savings ($)	$2,355	$1,148	$907
Comments:	1. Proposed Infiltration Based on ASHRAE 90.1 - 2007 2. Savings Based on Avg. Monthly Temperature for Jul-13 to Jun-14		

Energy Savings Summary:

ECM #7 - ENERGY SAVINGS SUMMARY	
Installation Cost ($):	$18,750
NJ Smart Start Equipment Incentive ($):	$0
Net Installation Cost ($):	$18,750
Maintenance Savings ($/Yr):	$0
Energy Savings ($/Yr):	$907
Total Yearly Savings ($/Yr):	$907
Estimated ECM Lifetime (Yr):	20
Simple Payback	20.7
Simple Lifetime ROI	-3%
Simple Lifetime Maintenance Savings	$0
Simple Lifetime Savings	$18,133
Internal Rate of Return (IRR)	0%
Net Present Value (NPV)	($617)

ECM WE#1 thru WE#3

Wedgwood Lighting Upgrades

ECM #1: Replace 5 incandescent lamps with CFLs

On the day of the site visit, SWA completed a lighting inventory of the Wedgwood Elementary School (see Appendix C). The existing lighting inventory contained a total of five inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $160
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$160	540	0.0	0	0.0	$0	$85	5	$424	1.9	165%	33%	45%	$264	967

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Wedgewood Elementary not eligible for Direct Install Program due to demand volume

ECM #2: Replace existing high bay metal halide lighting fixtures with fifteen new LED fixtures

On the day of the site visit, SWA completed a lighting inventory of Wedgwood Elementary School (see Appendix C). The gymnasium lighting consists of standard probe start Metal Halide (MH) lamps. SWA recommends replacing the interior higher wattage MH fixtures with LED lamps which offer better performance characteristics. They produce higher light output both initially and over time, operate more efficiently, produce whiter light, last much longer and turn on and re-strike faster. Due to these characteristics, energy savings can be realized via one-to-one substitution of lower-wattage systems, or by taking advantage of higher light output and reducing the number of fixtures required in the space. Additionally, because of the higher light output the gymnasium may require less fixtures, thus reducing the initial cost and improving the simple payback compared to the numbers below. The labor for the recommended installations is assumed to be performed by in-house electricians.

*It is important to note that further savings maybe achieved if the number of fixtures can be reduced based on the light quality of the LED fixtures. Washington Township Board of Education removed 15 MH light fixtures in a similar-sized gym at Hurffville Elementary School and were able to install only 9 LED fixtures and achieve the same light quality. All costs and associated analysis based on utilizing LED replacements.

Installation cost:
Estimated installed cost: $11,370
Source of cost estimate: Washington Township BOE previous lighting retrofit

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$11,370	4,916	1.0	0	0.3	$0	$772	15	$11,581	14.7	2%	0%	0%	$211	8,802

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Wedgewood Elementary not eligible for Direct Install Program due to demand volume

ECM #3: Replace 19 old LED Exit Signs with Newer LED Exit Signs

During the field audit, SWA completed a building lighting inventory (see Appendix C). SWA observed that the building contains a number of old LED Exit signs. SWA recommends replacing these with newer low wattage LED types. Replacing existing Exit signs with newer LED Exit signs can result in lower kilowatt-hour consumption, as well as lower maintenance costs. Since Exit signs operate 24 hours per day, they can consume large amounts of energy. In addition, older Exit signs require frequent maintenance due to the short life span of the lamps that light them. LED Exit signs last at least 5 years. In addition, LED Exit signs offer better fire code compliance because they are maintenance free in excess of 10 years. LED Exit signs are usually brighter than comparable incandescent or fluorescent signs, and have a greater contrast with their background due to the monochromatic nature of the light that LEDs emit. The building owner may decide to perform this work with in-house resources from the Maintenance Department on a scheduled, longer timeline than otherwise performed by a contractor.

Installation cost:
Estimated installed cost: $4,450
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$4,450	3,662	1.0	0	0.2	$0	$575	15	$8,628	7.9	90%	6%	9%	$4,078	6,557

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, Wedgewood Elementary not eligible for Direct Install Program due to demand volume

ECM WE#4

Wedgwood Occupancy Sensors

ECM #4: Install 26 new occupancy sensors

On the days of the site visits, SWA completed a lighting inventory of Wedgwood Elementary School (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:

Estimated installed cost: $6,120
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$5,600	3,211	0.0	0	0.2	$0	$504	10	$5,041	11.1	-10%	-1%	-2%	-$559	5,749

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
  - Maximum Incentive Amount: $520.
• NJ Clean Energy – Direct Install (Up to 70% of installed costs) Incentive listed in Energy Audit however, Wedgewood Elementary not eligible for Direct Install Program due to demand volume

ECM WH#1 thru WH#3

Whitman Lighting Upgrades

ECM #1: Replace 11 incandescent lamps with CFLs

On the day of the site visit, SWA completed a lighting inventory of the Whitman Elementary School (see Appendix C). The existing lighting inventory contained a total of 11 inefficient incandescent lamps. SWA recommends that each incandescent lamp is replaced with a more efficient, Compact Fluorescent Lamp (CFL). CFLs are capable of providing equivalent or better light output while using less power.

Installation cost:

Estimated installed cost: $320
Source of cost estimate: RS Means; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$320	1,060	0.0	0	0.1	$0	$179	5	$896	0.6	180%	36%	48%	$576	1,898

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Whitman Elementary not eligible for Direct Install Program due to demand volume

ECM #2: Replace existing high bay metal halide lighting fixtures with fifteen new LED fixtures

On the day of the site visit, SWA completed a lighting inventory of Whitman Elementary School (see Appendix C). The gymnasium lighting consists of standard probe start Metal Halide (MH) lamps. SWA recommends replacing the interior higher wattage MH fixtures with LED lamps which offer better performance characteristics. They produce higher light output both initially and over time, operate more efficiently, produce whiter light, last much longer and turn on and re-strike faster. Due to these characteristics, energy savings can be realized via one-to-one substitution of lower-wattage systems, or by taking advantage of higher light output and reducing the number of fixtures required in the space. Additionally, because of the higher light output the gymnasium may require less fixtures, thus reducing the initial cost and improving the simple payback compared to the numbers below. The labor for the recommended installations is assumed to be performed by in-house electricians.

*It is important to note that further savings maybe achieved if the number of fixtures can be reduced based on the light quality of the LED fixtures. Washington Township Board of Education removed 15 MH light fixtures in a similar-sized gym at Hurffville Elementary School and were able to install only 9 LED fixtures and achieve the same light quality. All costs and associated analysis based on utilizing LED replacements.

Installation cost:
Estimated installed cost: $11,370
Source of cost estimate: Washington Township BOE previous lighting retrofit

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$11,370	4,916	1.0	0	0.2	$0	$831	15	$12,466	6.5	10%	1%	1%	$1,096	8,802

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:

• NJ Clean Energy – Direct Install program (Up to 70% of installed costs) Incentive listed in Energy Audit however, Whitman Elementary not eligible for Direct Install Program due to demand volume

ECM #3: Replace 16 old LED Exit Signs with Newer LED Exit Signs

During the field audit, SWA completed a building lighting inventory (see Appendix C). SWA observed that the building contains a number of old LED Exit signs. SWA recommends replacing these with newer low wattage LED types. Replacing existing Exit signs with newer LED Exit signs can result in lower kilowatt-hour consumption, as well as lower maintenance costs. Since Exit signs operate 24 hours per day, they can consume large amounts of energy. In addition, older Exit signs require frequent maintenance due to the short life span of the lamps that light them. LED Exit signs last at least 5 years. In addition, LED Exit signs offer better fire code compliance because they are maintenance free in excess of 10 years. LED Exit signs are usually brighter than comparable incandescent or fluorescent signs, and have a greater contrast with their background due to the monochromatic nature of the light that LEDs emit. The building owner may decide to perform this work with in-house resources from the Maintenance Department on a scheduled, longer timeline than otherwise performed by a contractor.

Installation cost:
Estimated installed cost: $3,950
Source of cost estimate: RS Means, Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$3,950	3,003	1.0	0	0.2	$0	$508	15	$7,616	4.1	93%	6%	10%	$3,666	5,377

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – Direct Install (Up to 70% of installed cost) Incentive listed in Energy Audit however, Wedgewood Elementary not eligible for Direct Install Program due to demand volume

ECM WH#4

Whitman Occupancy Sensors

ECM #4: Install 10 new occupancy sensors

On the days of the site visits, SWA completed a lighting inventory of Whitman Elementary School (see Appendix C). The building contains several areas that could benefit from the installation of occupancy sensors. These areas consisted of various storage rooms, bathrooms and offices that are used sporadically throughout the day and could show energy savings by having the lights turn off after a period of no occupancy. Typically, occupancy sensors have an adjustable time delay that shuts down the lights automatically if no motion is detected within a set time period. Advanced micro-phonic lighting sensors include sound detection as a means to controlling lighting operation.

Installation cost:
Estimated installed cost: $2,300
Source of cost estimate: RS *Means; Published and established costs, NJ Clean Energy Program*

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$2,100	3,476	0.0	0	0.2	$0	$587	10	$5874	3.4	180%	18%	25%	$3,774	6,224

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis.

Rebates/financial incentives:
• NJ Clean Energy – SmartStart – Wall-mounted Occupancy Sensors ($20 per control)
  - Maximum Incentive Amount: $200
• NJ Clean Energy – Direct Install (Up to 70% of installed costs) Incentive listed in Energy Audit however, Wedgewood Elementary not eligible for Direct Install Program due to demand volume

ECM ECC#1

Grenloch ECC Replace Gas DHW heater in Old School

ECM#1: Replace gas DHW heater in Old Building

The Old Building contains an AO Smith gas-fired DHW heater with 40 gallons of storage located in the boiler room. This domestic water heater was installed in 1988 and is currently operating beyond its expected useful lifetime. It was determined that this older water heater is operating at a thermal efficiency of 78%, while a newer seal-combustion water heater will have a minimum efficiency of 84%.

Based on similar replacements of water heaters by the Washington Township Board of Education, it is recommended that the school install a Lochinvar condensing water heater or similar. Condensing water heaters are capable of a minimum thermal efficiency of 84% with efficiencies possible of up to 94% when in condensing mode.

Installation cost:
Estimated installed cost: $5,000
Source of cost estimate: RS Means Cost Works software; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$4,950	0	0.0	26	0.1	$0	$22	10	$218	226.8	-96%	-10%	-36%	-$4,732	289

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis. The existing DHW is assumed to have a thermal efficiency of 78%, while a new condensing water heater will have a minimum thermal efficiency of 84% at all times.

Rebates/financial incentives:
• NJ Clean Energy – NJ SmartStart Program
  - Incentive available for gas hot water heaters - $50 per unit

ECM ECC#2

Grenloch ECC Replace Electric DHW heater in New School

ECM#2: Replaced electric DHW heater in New School

The New Building contains an AO Smith electric DHW heater with 50 gallons of storage located in a mechanical closet near the Nurse's office. This unit has an upper element (4,500W) and a lower element (4,500W) with a maximum output of 4,500W. This unit was installed in 1988 and is operating beyond its expected useful lifetime.

This measure will consists of an in-kind replacement for the current electric water heater. Since electric heaters are 100% efficient by nature, there will not be a significant energy savings. Based on the age of the equipment, it is assumed that the tank liner and other components of the water heater have failed and are causing a 5% decrease in operating efficiency.

Installation cost:
Estimated installed cost: $5,000
Source of cost estimate: RS Means Cost Works software; Published and established costs, NJ Clean Energy Program

Economics:

net est. ECM cost with incentives, $	kWh, 1st yr savings	kW, demand reduction/mo	therms, 1st yr savings	kBtu/sq ft, 1st yr savings	est. operating cost, 1st yr savings, $	total 1st yr savings, $	life of measure, yrs	est. lifetime cost savings, $	simple payback, yrs	lifetime return on investment, %	annual return on investment, %	internal rate of return, %	net present value, $	CO_2 reduced, lbs/yr
$5,000	481	3.2	0	0.1	$0	$80	10	$795	62.9	-84%	-8%	-24%	-$4,205	861

Assumptions: SWA calculated the savings for this measure using measurements taken the days of the field visits and using the billing analysis. The existing DHW is assumed to have a 5% decrease in efficiency due to failed components based on the age of the equipment. A new electric DHW heater will not have a higher nameplate efficiency; however, savings will occur based on removing the outdated equipment.

Rebates/financial incentives:
• No incentives available for an electric DHW heater

VI. Direct Install Program

The New Jersey Board of Public Utilities Clean Energy Program currently offers a Direct Install Program for customers whose buildings have a peak demand of less than 200 kilowatts. The program has enlisted specific contractors throughout the state of New Jersey who implement the program in assigned regions. Customers contact the appropriate contractor and a free energy assessment is performed to identify energy upgrades. Once the assessment is completed, it provides the customer with a scope of work to be performed, energy savings, project costs, and incentives. The program provides incentives to customers to install energy upgrades by a 70/30 percentage of construction cost split, with 30% of the cost burden on the customer and 70% being covered by the program.

Due to 200 kW peak electric demand threshold for the Direct Install Program, Grenloch ECC is the only school buildings that would qualify for the Direct Install Program.

VII. Design and Compliance, Maintenance Impacts, and Risks

Design and Compliance Issues:
As part of the ESP development, Remington & Vernick Engineers has licensed professional engineers on staff to ensure that all design and compliance issues are encompassed in the Plan and that recommended measures will meet all applicable State of New Jersey Codes.

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

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

VIII. PJM Demand Response & Curtailable Service Programs

The regional transmission organization PJM oversees the electricity grid in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. PJM currently offers various demand response programs to end users on the grid an opportunity to generate revenue through curtailing electric load in their facility from the grid. There are various levels of commitment that can be accepted by the end user to participate in the program.

Three of the most common programs offered by PJM currently are the Emergency Load Response Program, Economic Load Response Program, and Synchronized Reserves Market. The Emergency Response Program allows end-users to receive financial incentives through agreeing to reduce a set amount of electricity consumption during system emergencies on the grid. The Economic Load Response Program allows end users to receive financial incentives for voluntarily reducing electricity consumption during times of high wholesale prices. The Synchronized Reserves Market allows end users to receive financial incentives for reducing electricity consumption on short notice in case of an unexpected emergency event. Each of these programs has stipulations in order to participate, such as number of events one must participate, amount of load to be curtailed, and response time.

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

IX. ESIP Cash Flow Summary

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

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

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

Project Name	Washington Township Board of Education Energy Savings Improvements
# ECMs Implemented	62
Project Cost	$1,965,746
Incentives	$31,931
Net Project Costs	$1,933,815
Electric Savings	$177,720
Natural Gas Savings	-$2,251
Operating Cost Savings	$68
Net Utility Savings	$175,537
Maintenance Savings / Cost Impact	$0
Interest Rate	4.0%
Electric Escalation	2.2%
Natural Gas Escalation	2.4%
Weighted Average Utility Escalation	2.197%
Percent Financed	100.0%
Discount Rate	8.0%
Finance Issuance Amount	

Term	Additional	Energy	Maintenance	Total	Principal	Interest	Loan	Total	Net	Cumulative
Years	Cash Outlay	Savings	Savings	Savings	Remaining	Expense	Principal	Payments	Cash Flow	Cash Flow
0	$ -									
1	$ -	$175,537	$0	$175,537	$1,933,815	$77,353	$96,577	$173,929	$1,608	$1,608
2	$ -	$179,393	$0	$179,393	$1,837,238	$73,490	$100,440	$173,929	$5,464	$7,071
3	$ -	$183,334	$0	$183,334	$1,736,798	$69,472	$104,458	$173,929	$9,404	$16,476
4	$ -	$187,361	$0	$187,361	$1,632,341	$65,294	$108,636	$173,929	$13,431	$29,907
5	$ -	$191,476	$0	$191,476	$1,523,705	$60,948	$112,981	$173,929	$17,547	$47,454
6	$ -	$195,682	$0	$195,682	$1,410,724	$56,429	$117,501	$173,929	$21,753	$69,206
7	$ -	$199,980	$0	$199,980	$1,293,223	$51,729	$122,201	$173,929	$26,051	$95,257
8	$ -	$204,373	$0	$204,373	$1,171,023	$46,841	$127,089	$173,929	$30,444	$125,701
9	$ -	$208,862	$0	$208,862	$1,043,934	$41,757	$132,172	$173,929	$34,933	$160,634
10	$ -	$213,450	$0	$213,450	$911,762	$36,470	$137,459	$173,929	$39,521	$200,155
11	$ -	$218,139	$0	$218,139	$774,303	$30,972	$142,957	$173,929	$44,209	$244,364
12	$ -	$222,930	$0	$222,930	$631,346	$25,254	$148,676	$173,929	$49,001	$293,365
13	$ -	$227,827	$0	$227,827	$482,670	$19,307	$154,623	$173,929	$53,898	$347,263

14	$ -	$232,832	$0	$232,832	$328,047	$13,122	$160,808	$173,929	$58,902	$406,166
15	$ -	$237,946	$0	$237,946	$167,240	$6,690	$167,240	$173,929	$64,017	$470,182
Totals	$ -	$3,079,124	$ -	$3,079,124	$0	$675,127	$1,933,815	$2,608,942	$470,182	

Net Present Value (NPV):	$215,062
Participant Net Benefit:	$215,062
Benefit-Cost Ratio:	1.18

X. Greenhouse Gas Reductions

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

NJDEP Emissions Factors:

EMISSIONS FACTORS		
ENERGY TYPE	**CONVERSION FACTOR**	
Electricity	1.79	lbs CO2/kWh
Natural Gas	11.1	lbs CO2/therm

Emissions Reduction Per Measure:

CO2/GREENHOUSE GAS REDUCTION					
School	**ECM #**	**Description**	**Electric CO2, lbs**	**Natural Gas CO2, lbs**	**Total CO2 Emissions, lbs**
High School	ECM1	Replace 8 incandescent lamps with CFLs (9/10 Building)	897		897
	ECM2	Replace 100 incandescent lamps with CFLs (11/12 Building)	11,601		11,601
	ECM3	Replace 140 incandescent lamps with CFLs (Core Building)	22,079		22,079
	ECM4	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)	18,675		18,675
	ECM5	Install 127 new occupancy sensors (9/10 Building)	138,404		138,404
	ECM6	Install 62 new LEDs in stairwells (9/10 Building)	23,696		23,696
	ECM7	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)	15,175		15,175
	ECM8	Install 100 new occupancy sensors (11/12 Building)	103,687		103,687
	ECM9	Install 20 new LEDs in stairwells (Core Building)	5,601		5,601
	ECM10	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)	10,587		10,587
	ECM11	Install 49 new occupancy sensors (Core Building)	68,109		68,109
	ECM12	Exterior Door Replacement		25,193	25,193
Bunker Hill Middle	ECM1	Lighting Upgrade - Interior/Exterior	135,725		135,725
	ECM2	Lighting Controls	52,807		52,807
	ECM3	Vending Miser Controls	7,157		7,157
	ECM4	Walk-in Controls	4,537		4,537
	ECM5	High Efficiency Transformer	40,362		40,362

	ECM6	Energy Wheel Replacement	101,284	47,984	149,267
Chestnut Ridge Middle	ECM1	Vending Miser Controls	15,318		15,318
	ECM2	Walk-in Controls	3,599		3,599
	ECM3	High Efficiency Transformers	135,213		135,213
	ECM4	Domestic Boiler Upgrade		15,239	15,239
	ECM5	HVAC Controls Optimization	37,948	15,083	53,031
	ECM6	ECM Motor Exhaust Fans	13,719		13,719
	ECM7	Exterior Door Replacement		3,936	3,936
	ECM8	Lighting Upgrade - Interior/Exterior	62,588		62,588
	ECM9	Lighting Controls/Occupancy Sensors	48,391		48,391
Orchard Valley Middle	ECM1	Vending Miser Controls	11,741		11,741
	ECM2	Washing Machine Replacement		389	389
	ECM3	Walk-in Controls	3,599		3,599
	ECM4	High Efficiency Transformers	89,441		89,441
	ECM5	Exterior Door Replacement		3,936	3,936
	ECM6	ECM Motor Exhaust Fans	14,450		14,450
	ECM7	Lighting Upgrade - Interior/Exterior	75,403		75,403
	ECM8	Lighting Controls/Occupancy Sensors	54,175		54,175
Bells Elementary	ECM1	Install 7 new CFL fixtures	1,851		1,851
	ECM2	Replace 15 Metal Halide fixtures with LEDs	8,027		8,027
	ECM3	Install 19 new occupancy sensors	5,832		5,832
Birches Elementary	ECM1	Replace 7 incandescent lamps with CFLs	1,851		1,851
	ECM2	Replace 15 Metal Halide fixtures with 15 LED Fixtures	8,027		8,027
	ECM3	Replace 1 old LED exit sign with newer LED exit sign	3,450		3,450
	ECM4	Install 20 new occupancy sensors	5,056		5,056
Hurffville Elementary	ECM1	Replace 23 incandescent lamps with CFLs	4,988		4,988
	ECM2	Replace 6 incandescent Exit signs with new LED Exit signs	3,090		3,090
	ECM3	Replace 6 Metal Halide fixtures with LEDs	3,210		3,210
	ECM4	Install 27 new occupancy sensors	7,594		7,594
Thomas Jefferson Elementary	ECM1	Lighting Upgrade - Interior/Exterior	37,030		37,030
	ECM2	Lighting Controls/Occupancy Sensors	33,469		33,469
	ECM3	Replace Gym, Café and Stage with DX/Gas RTU	464,310	-110,105	354,205
	ECM4	High Efficiency Gas Domestic Boiler	139,108	-30,111	108,998
	ECM5	High Efficiency Transformer	90,684		90,684
	ECM6	Walk-in Controls	3,599		3,599
	ECM7	Exterior Door Replacement		3,969	3,969
Wedgewood Elementary	ECM1	Replace 5 incandescent lamps with CFLs	967		967

	ECM2	Replace existing high bay metal halide light fixtures with 15 LEDs	8,802		8,802
	ECM3	Replace 19 LED exit signs with newer LED exit signs	6,557		6,557
	ECM4	Install 26 occupancy sensors	5,749		5,749
Whitman Elementary	ECM1	Replace 11 incandescent lamps with CFLs	1,898		1,898
	ECM2	Replace 15 high bay metal halide fixtures with LEDs	8,802		8,802
	ECM3	Replace 16 old LED exit signs with newer LED exit signs	5,377		5,377
	ECM4	Install 10 occupancy sensors	6,224		6,224
Grenloch ECC	ECM1	Replace gas domestic hot water heater in old school		289	289
	ECM2	Replace electric domestic hot water heater in New School	861		861

XI. Measurement & Verification

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

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

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

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

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

Option A - Retrofit Isolation with Key Parameter Measurement

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

Option B - Retrofit Isolation with All Parameter Measurement

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

Option C - Utility Data Analysis

- For complex equipment replacement and controls projects.
- When predicted energy savings are in excess of 10 to 20% as compared with the record energy use.
- When energy savings per individual measure are not desired.

- When interactive effects are to be included.
- When the independent variables that affect energy use are complex and excessively difficult or expensive to monitor.

Option D - Calibrated Computer Simulation

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

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

Measurement & Verification Recommended Scopes of Work:

Scope 1: (Option A)
Measurement and Verification of this ECM can be provided upon request. Pre- and post-installation measurements of wattage on a sample size of fixtures will verify the reduction in energy consumption. Post-implementation measurement and verification of occupancy sensor operation can be provided through the use of occupancy sensor data loggers to ensure lighting energy savings is achieved and proper operation of occupancy sensors is verified.

Scope 2: (Option C)
Measurement and verification of this ECM can be provided on a whole building energy conservation approach with respect to the heating and cooling systems in the building. The recommended M&V plan for this ECM is a comparison based on the annual facility energy use through monitoring of the utility bills. The baseline consists of the utilization of the historical energy usage for these facilities.

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

Measurement and Verification Plan						
School	**ECM #**	**Description**	**Option A**	**Option B**	**Option C**	**Option D**
High School	ECM1	Replace 8 incandescent lamps with CFLs (9/10 Building)	X			
	ECM2	Replace 100 incandescent lamps with CFLs (11/12 Building)	X			
	ECM3	Replace 140 incandescent lamps with CFLs (Core Building)	X			
	ECM4	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)	X			
	ECM5	Install 127 new occupancy sensors (9/10 Building)	X			
	ECM6	Install 62 new LEDs in stairwells (9/10 Building)	X			
	ECM7	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)	X			
	ECM8	Install 100 new occupancy sensors (11/12 Building)	X			
	ECM9	Install 20 new LEDs in stairwells (Core Building)	X			
	ECM10	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)	X			
	ECM11	Install 49 new occupancy sensors (Core Building)	X			
	ECM12	Exterior Door Replacement	X			
Bunker Hill Middle	ECM1	Lighting Upgrade - Interior/Exterior	X			
	ECM2	Lighting Controls	X			
	ECM3	Vending Miser Controls	X			
	ECM4	Walk-in Controls	X			
	ECM5	High Efficiency Transformer				X
	ECM6	Energy Wheel Replacement				X
Chesnut Ridge Middle	ECM1	Vending Miser Controls	X			
	ECM2	Walk-in Controls	X			
	ECM3	High Efficiency Transformers				X
	ECM4	Domestic Boiler Upgrade				X
	ECM5	HVAC Controls Optimization	X			
	ECM6	ECM Motor Exhaust Fans				X
	ECM7	Exterior Door Replacement	X			
	ECM8	Lighting Upgrade - Interior/Exterior	X			
	ECM9	Lighting Controls/Occupancy Sensors	X			
Ochard Valley Middle	ECM1	Vending Miser Controls	X			
	ECM2	Washing Machine Replacement				X
	ECM3	Walk-in Controls	X			
	ECM4	High Efficiency Transformers				X
	ECM5	Exterior Door Replacement	X			
	ECM6	ECM Motor Exhaust Fans				X

	ECM7	Lighting Upgrade - Interior/Exterior	X			
	ECM8	Lighting Controls/Occupancy Sensors	X			
Bells Elementary	ECM1	Install 7 new CFL fixtures	X			
	ECM2	Install 19 new occupancy sensors	X			
Birches Elementary	ECM1	Replace 7 incandescent lamps with CFLs	X			
	ECM2	Replace 15 Metal Halide fixtures with 15 LED Fixtures	X			
	ECM3	Replace 1 old LED exit sign with newer LED exit sign	X			
	ECM4	Install 20 new occupancy sensors	X			
Hurffville Elementary	ECM1	Replace 23 incandescent lamps with CFLs	X			
	ECM2	Replace 6 incandescent Exit signs with new LED Exit signs	X			
	ECM3	Replace 6 Metal Halide fixtures with LEDs	X			
	ECM4	Install 27 new occupancy sensors	X			
Thomas Jefferson Elementary	ECM1	Lighting Upgrade - Interior/Exterior	X			
	ECM2	Lighting Controls/Occupancy Sensors	X			
	ECM3	Replace Gym, Café and Stage with DX/Gas RTU				X
	ECM4	High Efficiency Gas Domestic Boiler				X
	ECM5	High Efficiency Transformer				X
	ECM6	Walk-in Controls	X			
	ECM7	Exterior Door Replacement	X			
Wedgewood Elementary	ECM1	Replace 5 incandescent lamps with CFLs	X			
	ECM2	Replace existing high bay metal halide light fixtures with 15 LEDs	X			
	ECM3	Replace 19 LED exit signs with newer LED exit signs	X			
	ECM4	Install 26 occupancy sensors	X			
Whitman Elementary	ECM1	Replace 11 incandescent lamps with CFLs	X			
	ECM2	Replace 15 high bay metal halide fixtures with LEDs	X			
	ECM3	Replace 16 old LED exit signs with newer LED exit signs	X			
	ECM4	Install 10 occupancy sensors	X			
Grenloch ECC	ECM1	Replace gas domestic hot water heater in old school				X
	ECM2	Replace electric domestic hot water heater in New School				X

Appendix A - Project Summary Table

TABLE 1. ENERGY CONSERVATION MEASURES.																				
ECM No.	SCHOOL	ENERGY CONSRVTN. MEASURE (Per Audit)	DESCRIPTION	ESTIMATED INSTALLED COST, $	ESTIMATED INCENTIVES, $	NET ESTIMATED COST, $	ELECTRIC CONSUMPTION SAVINGS (kWh)	kW, DEMAND REDUCTION /MO	ELECTRIC, 1ST YEAR SAVINGS	NATURAL GAS SAVINGS (THERMS)	THERMS, 1ST YEAR SAVINGS	EST. OPERATING COST, 1ST YEAR SAVINGS, $	TOTAL 1ST YEAR SAVINGS, $	LIFE OF MEASURE, YRS.	ESTIMATED LIFETIME COST SAVINGS, $	SIMPLE PAYBACK, YRS.	LIFETIME RETURN ON INVESTMENT, %	ANNUAL RETURN ON INVESTMENT, %	INTERNAL RATE OF RETURN, %	NET PRESENT VALUE, $	CO2 REDUCED, LBS/YR.
ECM 1	HIGH SCHOOL	ECM1	Replace 8 incandescent lamps with CFLs (9/10 Building)	$225	$0	$225	501	0.0	$72	0	$0	$0	$72	5	$361	3.1	60%	12%	18%	$136	897
ECM 2		ECM2	Replace 100 incandescent lamps with CFLs (11/12 Building)	$2,806	$0	$2,806	6,479	0.0	$933	0	$0	$0	$933	5	$4,665	3.0	66%	13%	20%	$1,859	11,601
ECM 3		ECM3	Replace 140 incandescent lamps with CFLs (Core Building)	$3,928	$0	$3,928	12,331	0.0	$1,776	0	$0	$0	$1,776	5	$8,878	2.2	126%	25%	35%	$4,950	22,079
ECM 4		ECM4	Replace 35 high bay metal halide fixtures with LEDs (9/10 Building)	$26,325	$0	$26,325	10,430	2.0	$1,502	0	$0	$0	$1,502	10	$15,024	17.5	-43%	-4%	-9%	-$11,301	18,675
ECM 5		ECM6	Install 127 new occupancy sensors (9/10 Building)	$31,391	$2,540	$28,851	77,297	0.0	$11,131	0	$0	$0	$11,131	10	$111,308	2.6	286%	29%	37%	$82,457	138,404
ECM 6		ECM7	Install 62 new LEDs in stairwells (9/10 Building)	$19,923	$2,480	$17,443	13,234	0.0	$1,906	0	$0	$0	$1,906	15	$28,585	9.2	64%	4%	7%	$11,142	23,696
ECM 7		ECM8	Replace 45 old LED Exit Signs with Newer LED Exit Signs (11/12 Building)	$10,782	$0	$10,782	8,475	1.0	$1,221	0	$0	$0	$1,221	15	$18,310	8.8	70%	5%	7%	$7,528	15,175
ECM 8		ECM9	Install 100 new occupancy sensors (11/12 Building)	$24,717	$2,000	$22,717	57,908	0.0	$8,339	0	$0	$0	$8,339	10	$83,388	2.7	267%	27%	35%	$60,671	103,687
ECM 9		ECM10	Install 20 new LEDs in stairwells (Core Building)	$6,425	$700	$5,725	3,128	0.0	$450	0	$0	$0	$450	15	$6,756	12.7	18%	1%	2%	$1,031	5,601
ECM 10		ECM11	Replace 30 old LED Exit Signs with Newer LED Exit Signs (Core Building)	$7,188	$0	$7,188	5,913	0.8	$852	0	$0	$0	$852	15	$12,775	8.4	78%	5%	8%	$5,587	10,587
ECM 11		ECM12	Install 49 new occupancy sensors (Core Building)	$12,111	$980	$11,131	38,038	0.0	$5,477	0	$0	$0	$5,477	10	$54,775	2.0	392%	39%	48%	$43,644	68,109
ECM 12		N/A	Exterior Door Replacement	$160,000	$0	$160,000	0	0.0	$0	2,266	$2,105	$0	$2,105	20	$42,095	76.0	-74%	-4%	-10%	-$117,905	25,193
			TOTAL	**$305,821**		**$297,121**														
ECM 1	BUNKER HILL MIDDLE	ECM1	Lighting Upgrade - Interior/Exterior	$129,730	$2,681	$127,049	75,801	20.0	$10,844	0	$0	$0	$10,844	10	$108,443	11.7	-15%	-1%	-3%	-$18,606	135725
ECM 2		ECM2	Lighting Controls	$66,010	$2,795	$63,215	29,492	0.0	$4,217	0	$0	$0	$4,217	15	$63,260	15.0	0.1%	0%	0%	$45	52807
ECM 3		ECM3	Vending Miser Controls	$500	$0	$500	3,997	0.0	$572	0	$0	$0	$572	10	$5,716	0.9	1043%	104%	114%	$5,216	7157
ECM 4		ECM5	Walk-in Controls	$2,940	$150	$2,790	2,534	0.0	$362	0	$0	$0	$362	10	$3,624	7.7	30%	3%	5%	$834	4537
ECM 5		ECM6	High Efficiency XFMR	$28,130	$0	$28,130	22,542	4.2	$3,225	0	$0	$0	$3,225	20	$64,490	8.7	129%	6%	10%	$36,360	40362
ECM 6		ECM9	Energy Recovery Replacement	$118,750	$0	$118,750	56,583	0.0	$8,091	4,361	$4,570	$0	$12,662	15	$189,925	9.4	60%	4%	7%	$71,175	149267
			TOTAL	**$346,060**		**$340,434**														
ECM 1	CHESTNUT RIDGE MIDDLE	ECM1	Vending Miser Controls	$1,125	$0	$1,125	8,555	0.0	$1,249	0	$0	$0	$1,249	10	$12,490	0.9	1010%	101%	111%	$11,365	15,318
ECM 2		ECM3	Walk-in Controls	$2,940	$150	$2,790	2,010	0.0	$293	0	$0	$0	$293	10	$2,935	9.5	5%	1%	1%	$145	3,599
ECM 3		ECM4	High Efficiency Transformers	$87,500	$0	$87,500	75,515	14.1	$11,029	0	$0	$0	$11,029	20	$220,571	7.9	152%	8%	11%	$133,071	135,213
ECM 4		ECM5	Domestic Boiler Upgrade	$42,000	$1,400	$40,600	0	0.0	$0	1,371	$1,448	$0	$1,448	20	$28,956	28.0	-29%	-1%	-3%	-$11,644	15,239
ECM 5		ECM8	Controls Optimization	$62,500	$0	$62,500	21,200	0.0	$3,095	1,357	$1,433	$0	$4,528	15	$67,923	13.8	9%	1%	1%	$5,423	53,031
ECM 6		ECM9	ECM Motor Exhaust Fans	$14,470	$0	$14,470	7,662	2.6	$1,119	0	$0	$0	$1,119	15	$16,789	12.9	16%	1%	2%	$2,319	13,719
ECM 7		ECM10	Exterior Door Replacement	$18,750	$0	$18,750	0	0.0	$0	354	$374	$0	$374	20	$7,476	50.2	-60%	-3%	-8%	-$11,274	3,936
ECM 8		ECM11	Lighting Upgrade - Interior/Exterior	$35,990	$2,300	$33,690	34,955	9.0	$5,106	0	$0	$0	$5,106	10	$51,056	6.6	52%	5%	8%	$17,366	62,588
ECM 9		ECM12	Lighting Controls	$63,440	$2,400	$61,040	27,026	0.0	$3,946	0	$0	$0	$3,946	15	$59,187	15.5	-3%	0%	0%	-$1,853	48,391
			TOTAL	**$328,715**		**$322,465**														
ECM 1	ORCHARD VALLEY MIDDLE	ECM1	Vending Miser Controls	$875	$0	$875	6,557	0.0	$1,036	0	$0	$0	$1,036	10	$10,360	0.8	1084%	108%	118%	$9,485	11,741
ECM 2		ECM3	Washing Machine Replacement	$940	$0	$940	0	0.0	$0	35	$39	$68	$107	10	$1,071	8.8	14%	1%	2%	$131	389
ECM 3		ECM4	Walk-in Controls	$2,940	$150	$2,790	2,010	0.0	$318	0	$0	$0	$318	10	$3,176	8.8	14%	1%	2%	$386	3,599
ECM 4		ECM5	High Efficiency Transformers	$62,500	$0	$62,500	49,952	9.3	$7,895	0	$0	$0	$7,895	20	$157,893	7.9	153%	8%	11%	$95,393	89,441
ECM 5		ECM9	Exterior Door Replacement	$18,750	$0	$18,750	0	0.0	$0	354	$374	$0	$374	20	$7,476	50.2	-60%	-3%	-8%	-$11,274	3,936
ECM 6		ECM10	ECM Motor Exhaust Fans	$16,250	$0	$16,250	8,070	2.7	$1,276	0	$0	$0	$1,276	15	$19,136	12.7	18%	1%	2%	$2,886	14,450
ECM 7		ECM12	Lighting Upgrade - Interior/Exterior	$45,950	$3,200	$42,750	42,112	10.6	$6,656	0	$0	$0	$6,656	10	$66,562	6.4	56%	6%	9%	$23,812	75,403
ECM 8		ECM13	Lighting Controls	$65,050	$2,460	$62,590	30,256	0.0	$4,780	0	$0	$0	$4,780	15	$71,707	13.1	15%	1%	2%	$9,117	54,175
			TOTAL	**$213,255**		**$207,445**														
ECM 1	BELLS ELEMENTARY	ECM1	Install 7 new CFL fixtures	$220	$0	$220	1,034	0.0	$172	0	$0	$0	$172	5	$858	1.3	290%	58%	73%	$638	1,851
ECM 2		ECM3	Install 19 new occupancy sensors	$4,480	$380	$4,100	3,257	0.0	$541	0	$0	$0	$541	10	$5,407	7.6	32%	3%	5%	$1,307	5,832
			TOTAL	**$4,700**		**$4,320**														
ECM 1	BIRCHES ELEMENTARY	ECM1	Install 7 new CFL fixtures	$220	$0	$220	1,034	0.0	$154	0	$0	$0	$154	5	$770	1.4	250%	50%	64%	$550	1,851
ECM 2		ECM2	Replace 15 MH fixtures with LEDs	$11,370	$0	$11,370	4,483	2.1	$668	0	$0	$0	$668	10	$6,685	17.0	-41%	-4%	-9%	-$4,685	8,027
ECM 3		ECM3	Replace 1 old LED exit sign with newer LED exit sign	$300	$0	$300	1,927	0.1	$287	0	$0	$0	$287	15	$4,307	1.0	1336%	89%	96%	$4,007	3,450
ECM 4		ECM4	Install 20 new occupancy sensors	$4,700	$400	$4,300	2,824	1.0	$421	0	$0	$0	$421	10	$4,210	10.2	-2%	0%	0%	-$90	5,056
			TOTAL	**$16,590**		**$16,190**														
ECM 1	HURFFVILLE ELEMENTARY	ECM1	Replace 23 incandescent lamps with CFLs	$660	$0	$660	2,786	0.0	$421	0	$0	$0	$421	5	$2,103	1.6	219%	44%	57%	$1,443	4,988
ECM 2		ECM2	Replace 6 incandescent Exit signs with new LED Exit signs	$1,280	$0	$1,280	1,726	0.0	$261	0	$0	$0	$261	10	$2,606	4.9	104%	10%	16%	$1,326	3,090
ECM 3		ECM3	Replace 6 MH fixtures with LEDs	$4,750	$0	$4,750	1,793	0.0	$271	0	$0	$0	$271	10	$2,707	17.5	-43%	-4%	-9%	-$2,043	3,210
ECM 4		ECM4	Install 27 new occupancy sensors	$6,290	$540	$5,750	4,241	2.0	$641	0	$0	$0	$641	10	$6,409	9.0	11%	1%	2%	$659	7,594
			TOTAL	**$12,980**		**$12,440**														
ECM 1	THOMAS JEFFERSON ELEMENTARY	ECM1	Lighting Upgrade - Interior/Exterior	$16,360	$1,400	$14,960	20,681	6.0	$2,897	0	$0	$0	$2,897	10	$28,968	5.2	94%	9%	14%	$14,008	37,030
ECM 2		ECM2	Lighting Controls	$31,000	$1,405	$29,595	18,692	0.0	$2,617	0	$0	$0	$2,617	10	$26,169	11.3	-12%	-1%	-2%	-$3,426	33,469
ECM 3		ECM4	Replace Gym, Café and Stage with RTU	$495,300	$0	$495,300	259,391	25.8	$36,321	-9906	-$9,906	$0	$26,415	15	$396,224	18.8	-20%	-1%	-3%	-$99,076	354,205
ECM 4		ECM6	High Efficiency Gas Domestic Boiler	$33,125	$500	$32,625	77,714	0.0	$10,880	-2709	-$2,709	$0	$8,171	15	$122,564	4.0	276%	18%	24%	$89,939	108,998
ECM 5		ECM7	High Efficiency XFMR	$90,000	$0	$90,000	50,646	9.7	$7,093	0	$0	$0	$7,093	25	$177,319	12.7	97%	4%	6%	$87,319	90,684
ECM 6		ECM8	Walk-in Controls	$2,950	$150	$2,800	2,010	0.0	$281	0	$0	$0	$281	15	$4,221	10.0	51%	3%	6%	$1,421	3,599
ECM 7		ECM10	Exterior Door Replacement	$18,750	$0	$18,750	6,476	0.0	$907	0	$0	$0	$907	20	$18,133	20.7	-3%	0%	0%	-$617	11,592
			TOTAL	**$687,485**		**$684,030**														
ECM 1	WEDGWOOD ELEMENTARY	ECM1	Install 5 new CFL fixtures	$160	$0	$160	540	0.0	$85	0	$0	$0	$85	5	$424	1.9	165%	33%	45%	$264	967
ECM 2		ECM2	Replace existing high bay MH light fixtures with 15 LEDs	$11,370	$0	$11,370	4,916	1.0	$772	0	$0	$0	$772	15	$11,581	14.7	2%	0%	0%	$211	8,802
ECM 3		ECM3	Replace 19 LED exit signs with newer LED exit signs	$4,550	$0	$4,550	3,662	1.0	$575	0	$0	$0	$575	15	$8,628	7.9	90%	6%	9%	$4,078	6,557
ECM 4		ECM4	Install 26 occupancy sensors	$6,120	$520	$5,600	3,211	0.0	$504	0	$0	$0	$504	10	$5,041	11.1	-10%	-1%	-2%	-$559	5,749
			TOTAL	**$22,200**		**$21,680**														
ECM 1	WHITMAN ELEMENTARY	ECM1	Replace 11 incandescent lamps with CFLs	$320	$0	$320	1,060	0.0	$179	0	$0	$0	$179	5	$896	0.6	180%	36%	48%	$576	1,898
ECM 2		ECM2	Replace 15 high bay MH fixtures with LEDs	$11,370	$0	$11,370	4,916	1.0	$831	0	$0	$0	$831	15	$12,466	6.5	10%	1%	1%	$1,096	8,802
ECM 3		ECM3	Replace 16 old LED exit signs with newer LED exit signs	$3,950	$0	$3,950	3,003	1.0	$508	0	$0	$0	$508	15	$7,616	4.1	93%	6%	10%	$3,666	5,377
ECM 4		ECM4	Install 10 occupancy sensors	$2,300	$200	$2,100	3,476	0.0	$587	0	$0	$0	$587	10	$5,874	3.4	180%	18%	25%	$3,774	6,224
			TOTAL	**$17,940**		**$17,740**														
ECM 1	GRENLOCH ECC	ECM1	Replace gas DHW heater in old school	$5,000	$50	$4,950	0	0.0	$0	26	$22	$0	$22	10	$218	226.8	-96%	-10%	-36%	-$4,732	289
ECM 2		ECM2	Replace electric DHW heater in New School	$5,000	$0	$5,000	481	3.2	$80	0	$0	$0	$80	10	$795	62.9	-84%	-8%	-24%	-$4,205	861

Appendix B - Historic Energy Consumption & Cost

High School Site

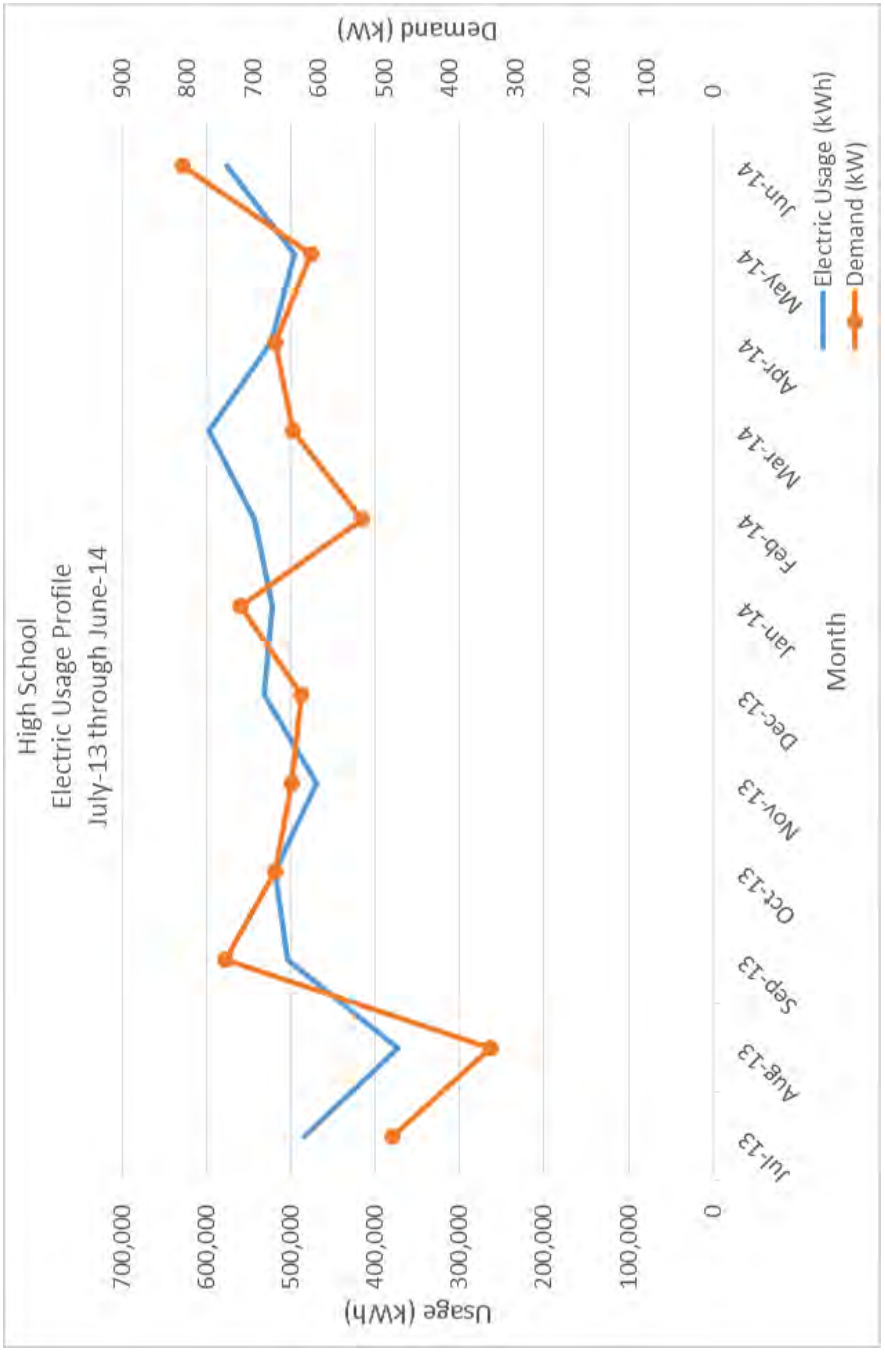
Electricity – The High School is currently served by a total of 5 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.144/kWh based on the consumption of 6,139,532 kWh at a total cost of $886,638, in the previous year. The annual monthly peak demand was 806.8 kW, while the average monthly demand was 623.8 kW. The chart below shows the monthly electric usage and costs.

ELECTRIC USAGE SUMMARY - BUNKER HILL MIDDLE

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	Multiple
Account #:	114960699998 024680599966 024590999967 024590499992 024591199997
Third Party Utility Provider:	FirstEnergy Sol

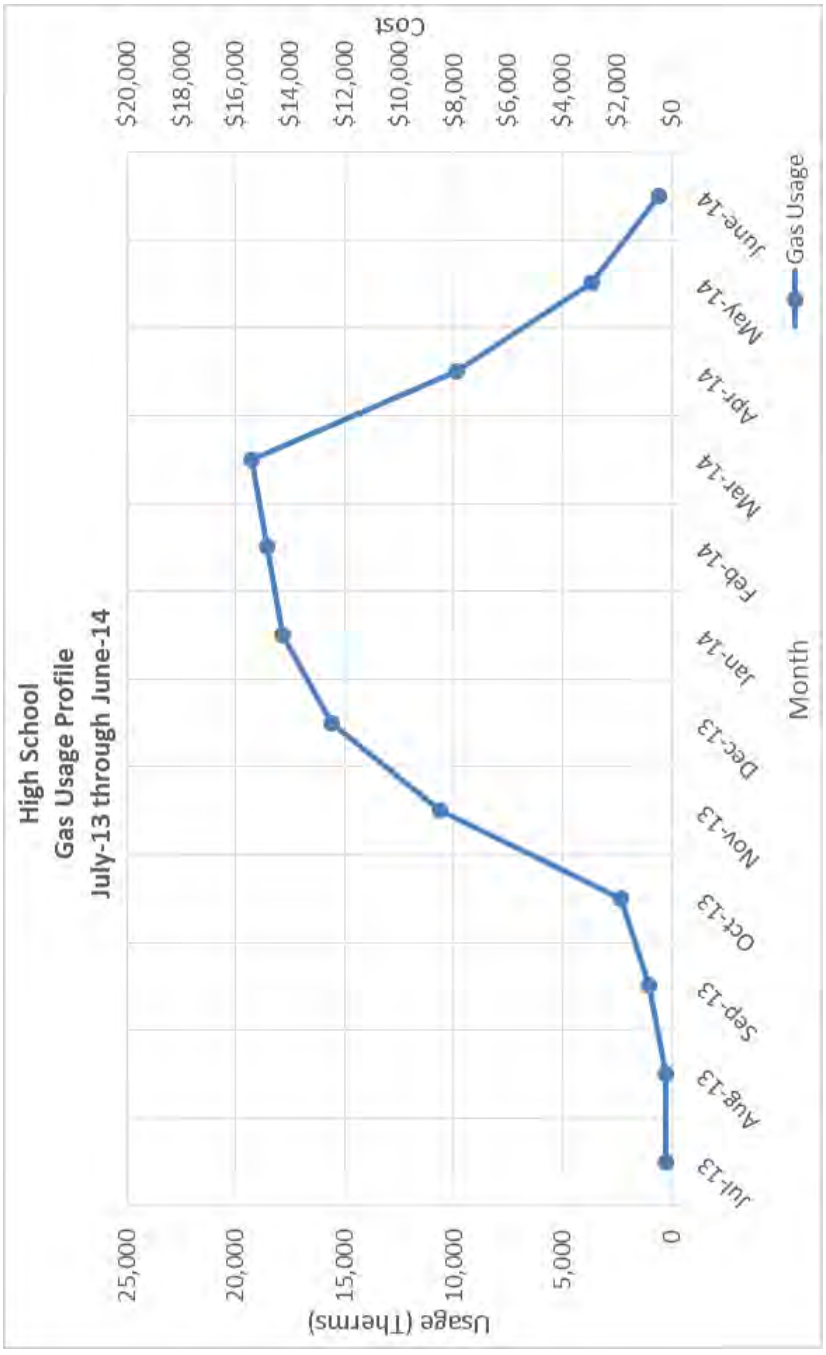
MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	576,303	806.76		$81,083.09
14-May	495,943	612		$72,609.60
14-Apr	523,666	666		$76,575.88
14-Mar	597,875	639		$84,162.91
14-Feb	543,172	534		$76,074.86
14-Jan	521,878	720		$77,308.25
13-Dec	531,490	627		$77,088.27
13-Nov	469,264	642		$67,864.02
13-Oct	518,423	668		$75,149.99
13-Sep	503,847	743		$73,650.26
13-Aug	372,761	339		$55,222.21
13-Jul	484,911	489		$69,848.54
Totals	**6,139,532**	**806.8**	**Max**	**$886,637.88**
	AVERAGE DEMAND	**623.8**	**KW average**	
	AVERAGE RATE	**$0.144**	**$/kWh**	

Electricity Usage Profile



Natural gas – The High School is currently served by two meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $0.929/therm based on the consumption of 99,962 therms at a total cost of $92,894, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Bunker Hill Middle School Site

Electricity – Bunker Hill Middle School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.143/kWh based on the consumption of 1,429,600 kWh at a total cost of $204,843, in the previous year. The annual monthly peak demand was 560.0 kW, while the average monthly demand was 426.0 kW. The chart below shows the monthly electric usage and costs.

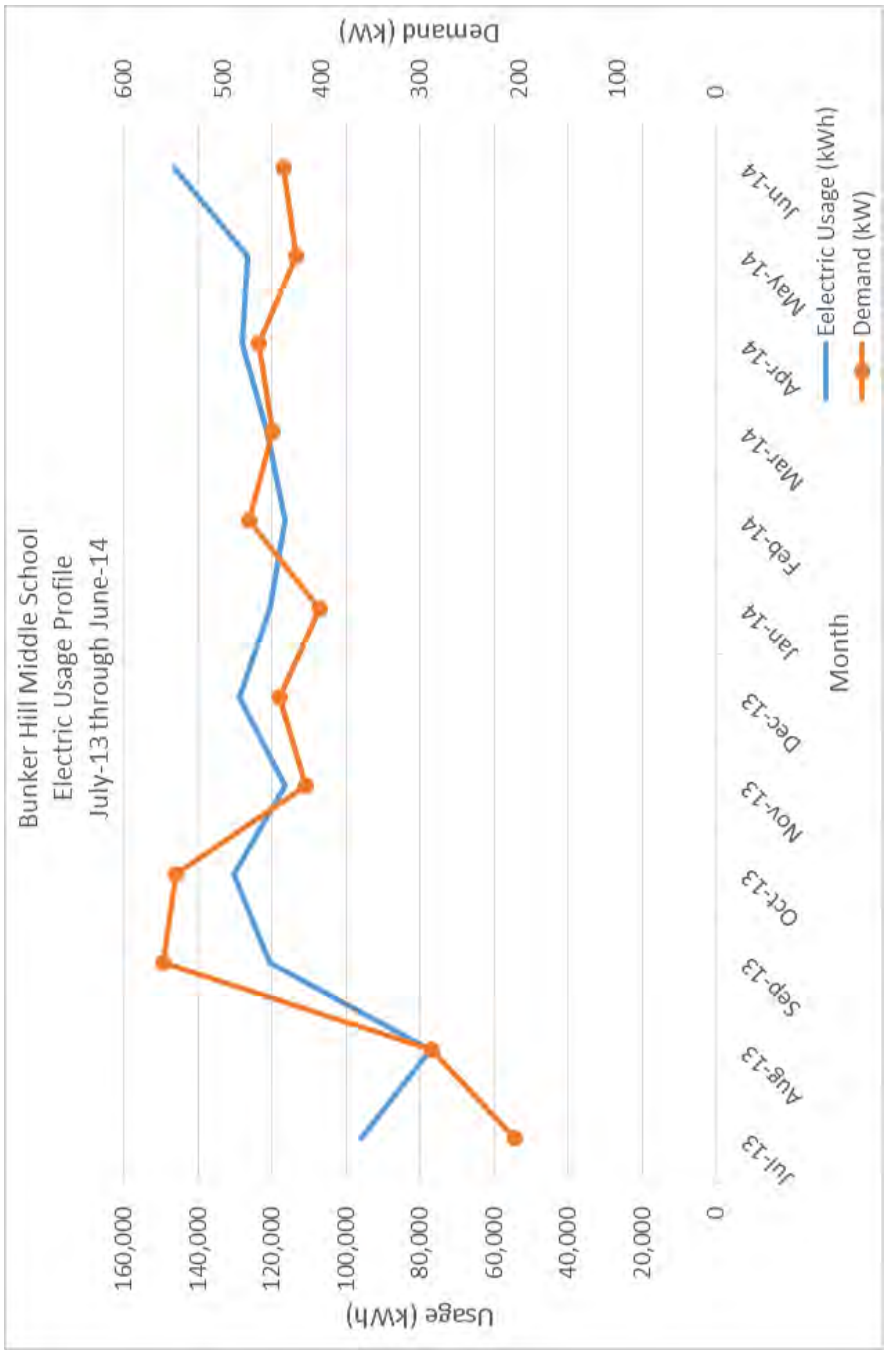
ELECTRIC USAGE SUMMARY - BUNKER HILL MIDDLE

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	36135528
Account #:	0245 9099 9975
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	146,600	438		$19,562.81
14-May	126,600	426		$17,674.09
14-Apr	128,200	464		$18,312.16
14-Mar	121,200	450		$17,066.40
14-Feb	116,400	474		$16,686.70
14-Jan	120,800	402		$17,480.81
13-Dec	129,000	442		$18,085.67
13-Nov	116,600	416		$16,439.39
13-Oct	130,200	548		$18,870.99
13-Sep	120,800	560		$17,969.42
13-Aug	77,400	288		$12,116.57
13-Jul	95,800	204		$14,578.24
Totals	**1,429,600**	**560.0**	**Max**	**$204,843.25**

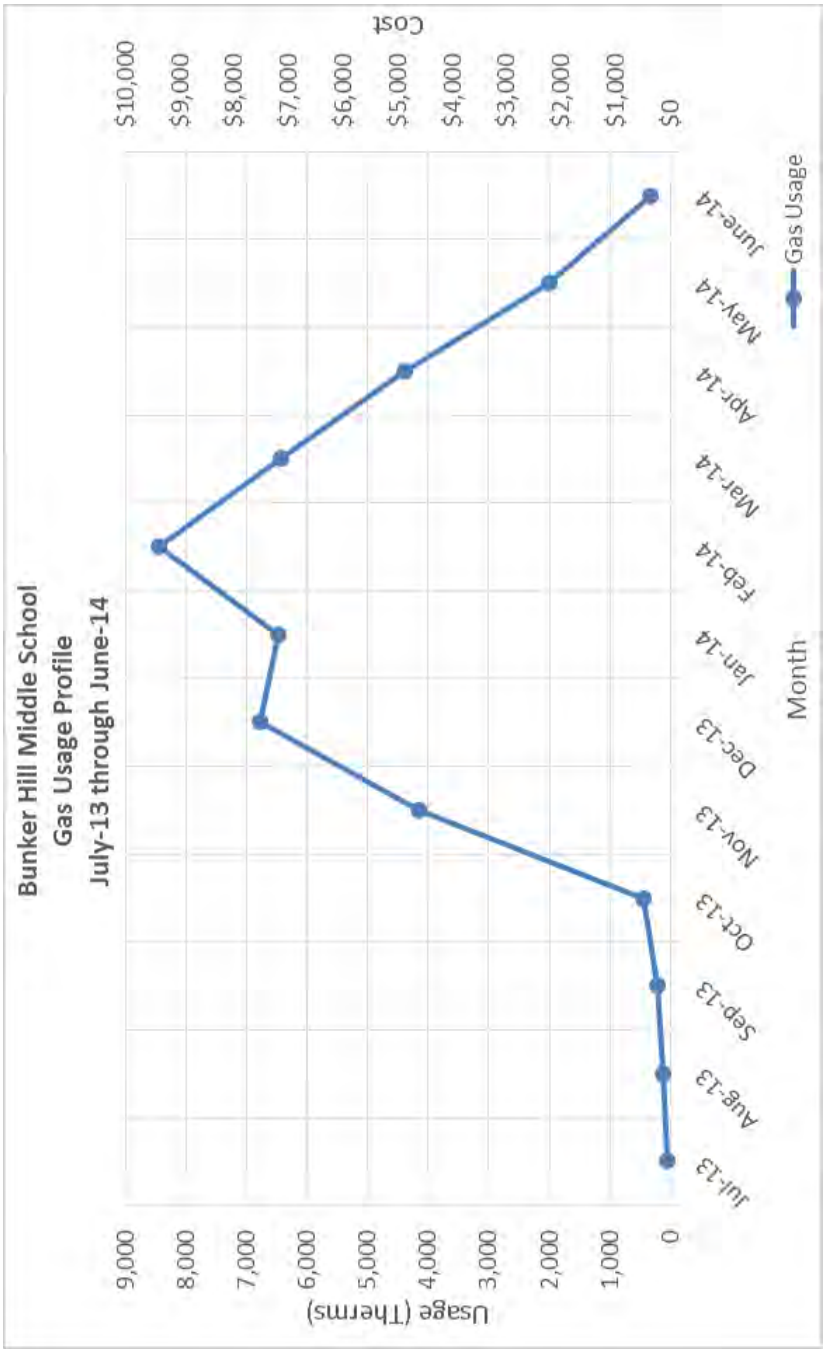
AVERAGE DEMAND	**426.0**	**KW average**
AVERAGE RATE	**$0.143**	**$/kWh**

Electricity Usage Profile



Natural gas – Bunker Hill Middle School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.048/therm based on the consumption of 39,845 therms at a total cost of $41,766, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Chestnut Ridge Middle School Site

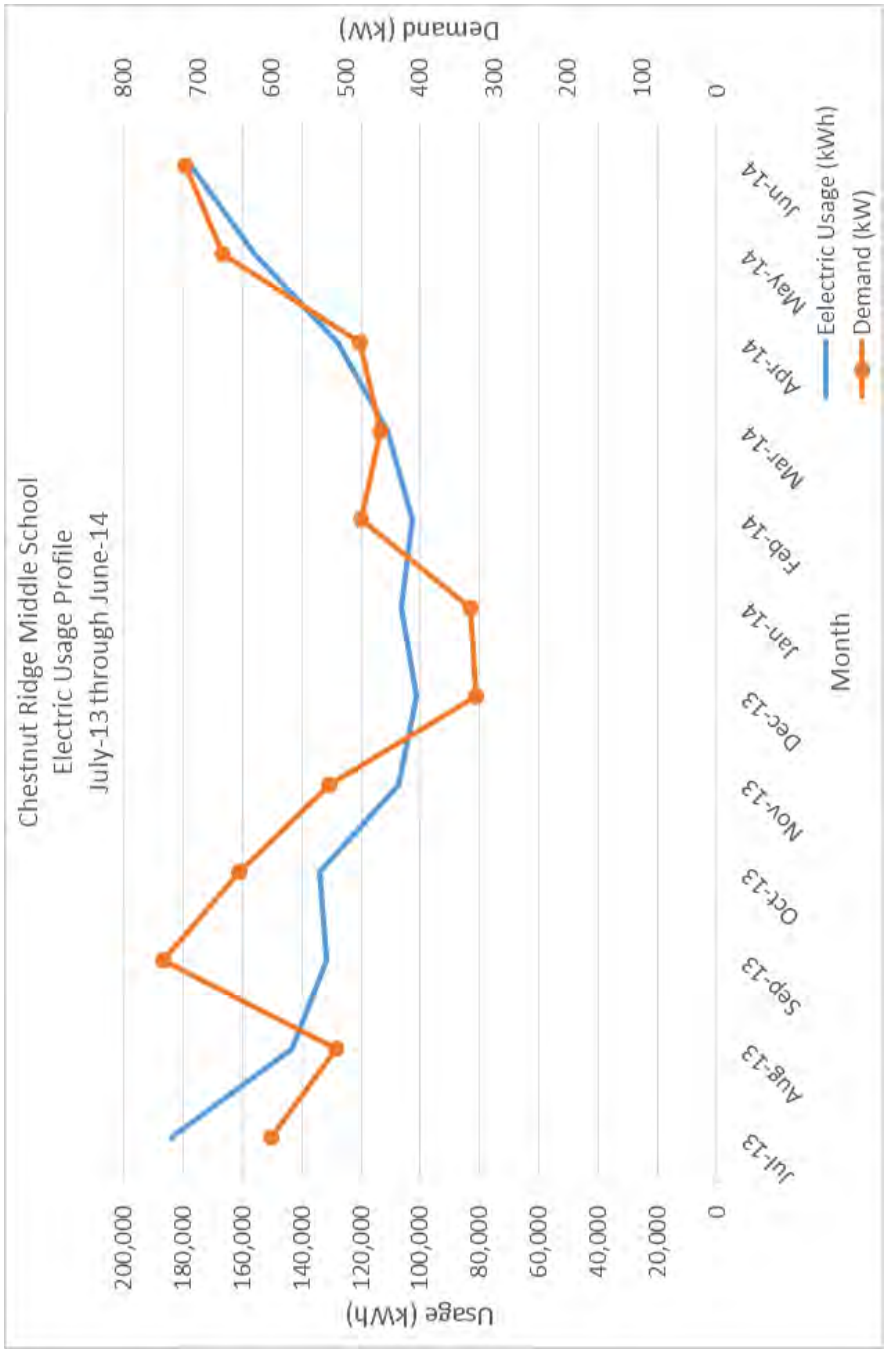
Electricity – Chestnut Ridge Middle School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.146/kWh based on the consumption of 1,583,408 kWh at a total cost of $231,598, in the previous year. The annual monthly peak demand was 747.7 kW, while the average monthly demand was 540.9 kW. The chart below shows the monthly electric usage and costs.

ELECTRIC USAGE SUMMARY - CHESTNUT RIDGE MIDDLE

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	86422374
Account #:	0837 8949 9999
Third Party Utility Provider:	FirstEnergy Sol

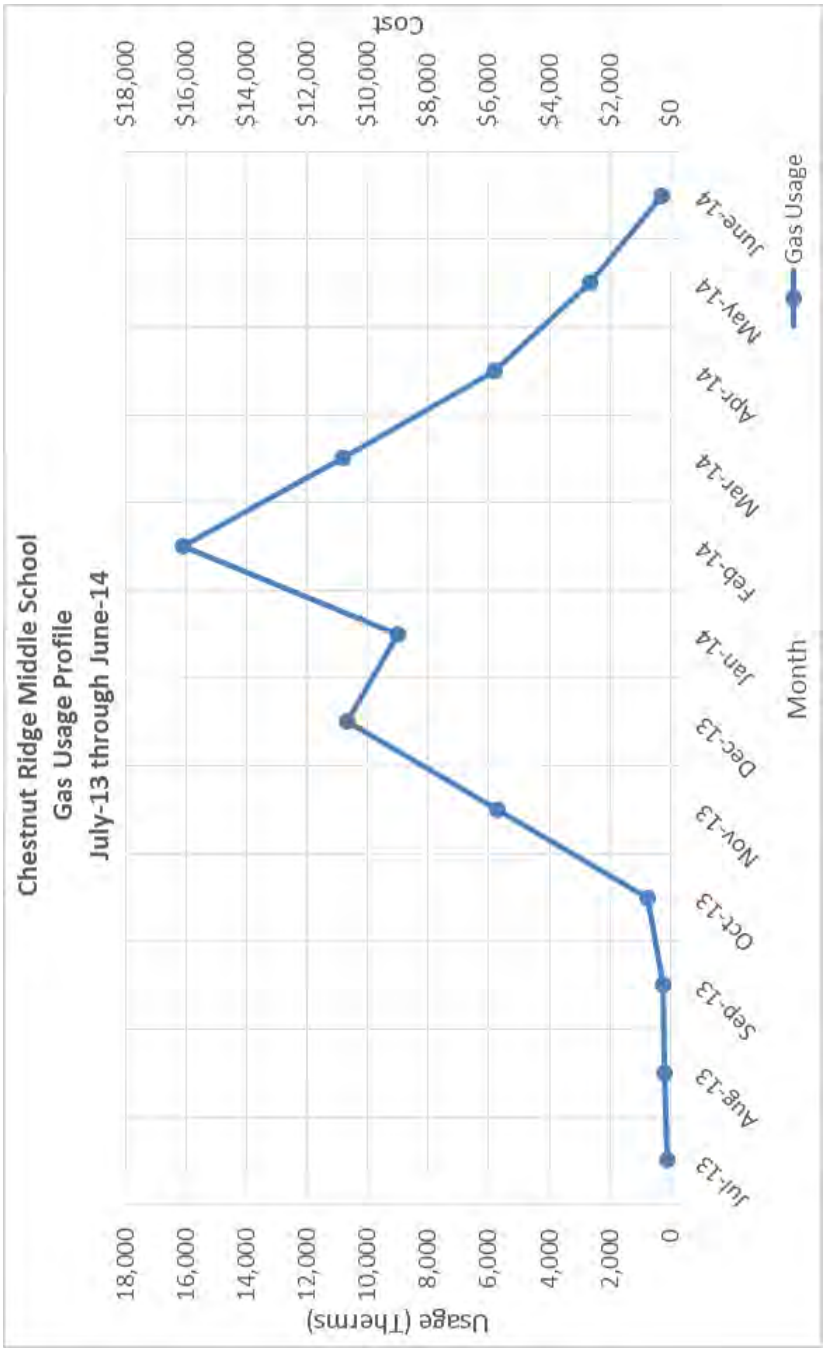
MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	177,531	717.48		$24,497.69
14-May	155,846	667.98		$22,627.99
14-Apr	127,897	481.5		$19,347.23
14-Mar	111,155	454.14		$13,544.77
14-Feb	102,742	479.88		$16,038.80
14-Jan	106,411	332.1		$16,758.15
13-Dec	101,264	325.8		$16,179.44
13-Nov	107,528	522.36		$16,526.74
13-Oct	133,979	644.94		$20,112.20
13-Sep	131,749	747.72		$20,098.72
13-Aug	143,447	514.44		$20,374.23
13-Jul	183,859	601.92		$25,491.79
Totals	**1,583,408**	**747.7**	**Max**	**$231,597.75**
	AVERAGE DEMAND	**540.9**	**KW average**	
	AVERAGE RATE	**$0.146**	**$/kWh**	

Electricity Usage Profile



Natural gas – Chestnut Ridge Middle School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.056/therm based on the consumption of 62,371 therms at a total cost of $65,864, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Orchard Valley Middle School Site

Electricity – Orchard Valley Middle School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.158/kWh based on the consumption of 1,293,964 kWh at a total cost of $204,863, in the previous year. The annual monthly peak demand was 731.0 kW, while the average monthly demand was 478.5 kW. The chart below shows the monthly electric usage and costs.

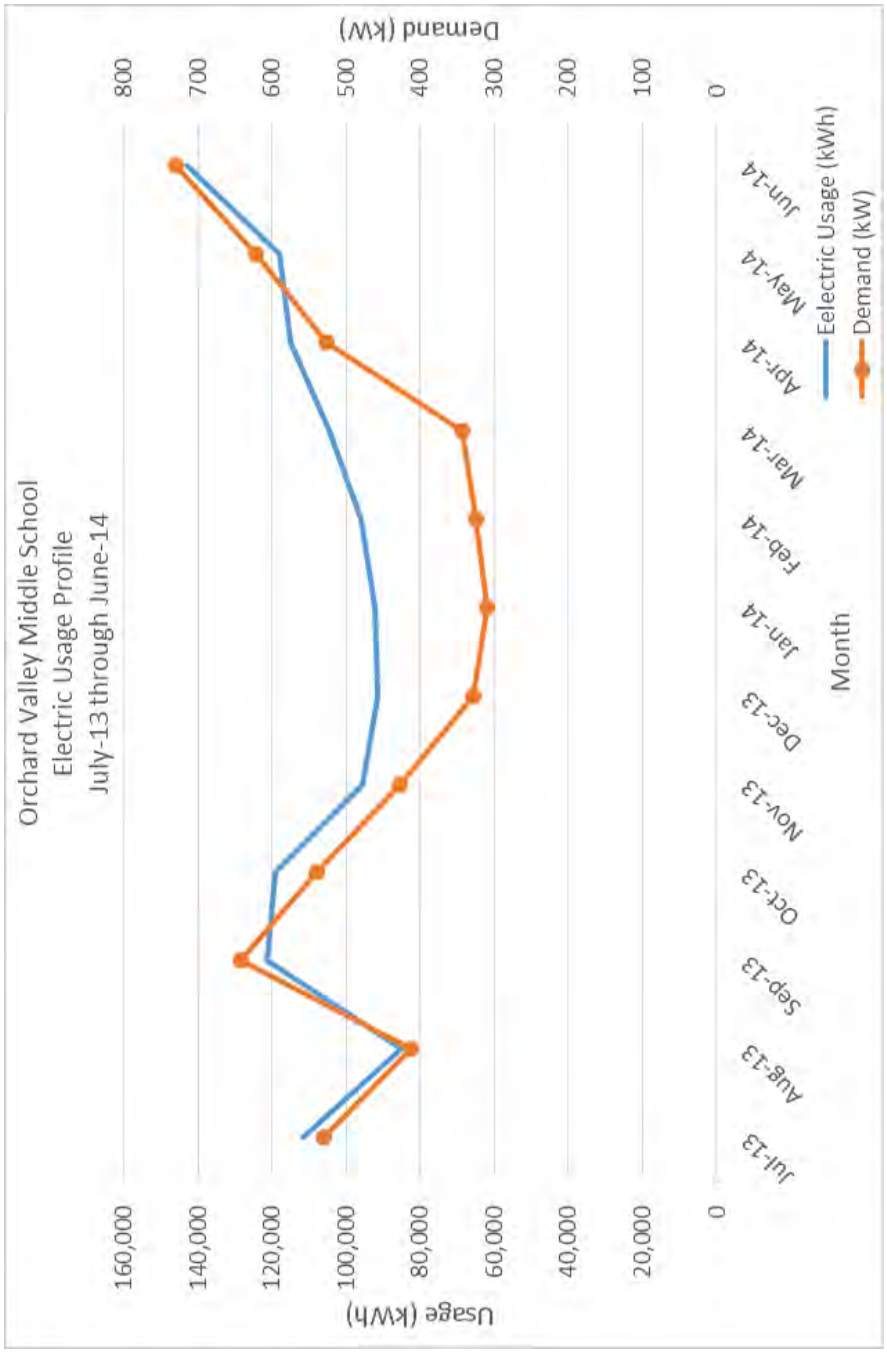
ELECTRIC USAGE SUMMARY - ORCHARD VALLEY MIDDLE

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	86422376
Account #:	0838 8849 9999
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	143,197	730.98		$20,845.38
14-May	118,022	621.36		$18,276.65
14-Apr	114,963	527.04		$18,259.15
14-Mar	104,526	344.16		$16,744.30
14-Feb	96,063	324.72		$15,620.92
14-Jan	92,363	310.5		$15,526.94
13-Dec	91,647	328.14		$15,450.65
13-Nov	95,523	428.22		$15,506.82
13-Oct	119,263	540.54		$18,555.26
13-Sep	121,414	642.6		$18,331.47
13-Aug	85,367	412.92		$14,098.03
13-Jul	111,616	531.18		$17,647.66
Totals	**1,293,964**	**731.0**	**Max**	**$204,863.22**

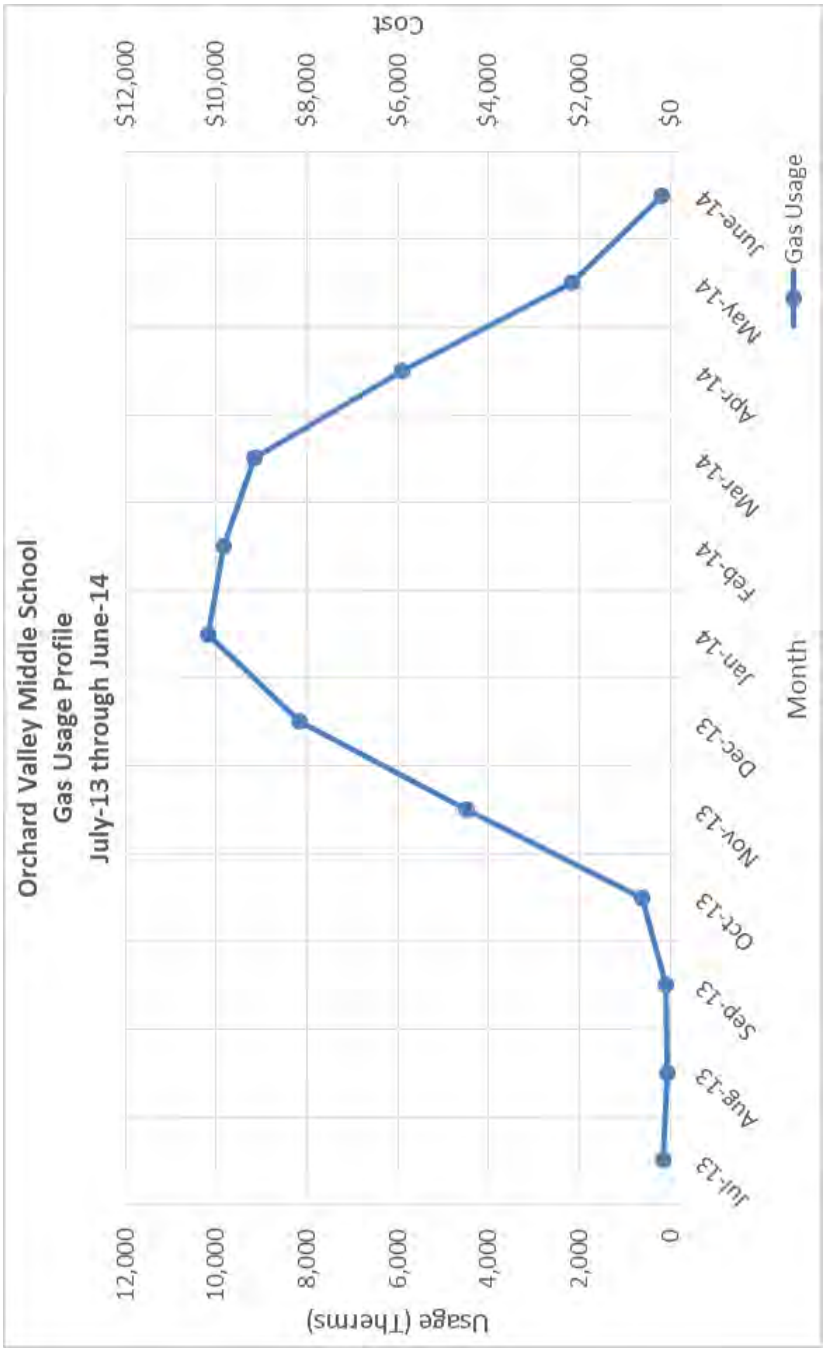
AVERAGE DEMAND	**478.5**	**KW average**
AVERAGE RATE	**$0.158**	**$/kWh**

Electricity Usage Profile



Natural gas – Orchard Valley Middle School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.117/therm based on the consumption of 51,075 therms at a total cost of $57,048, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile

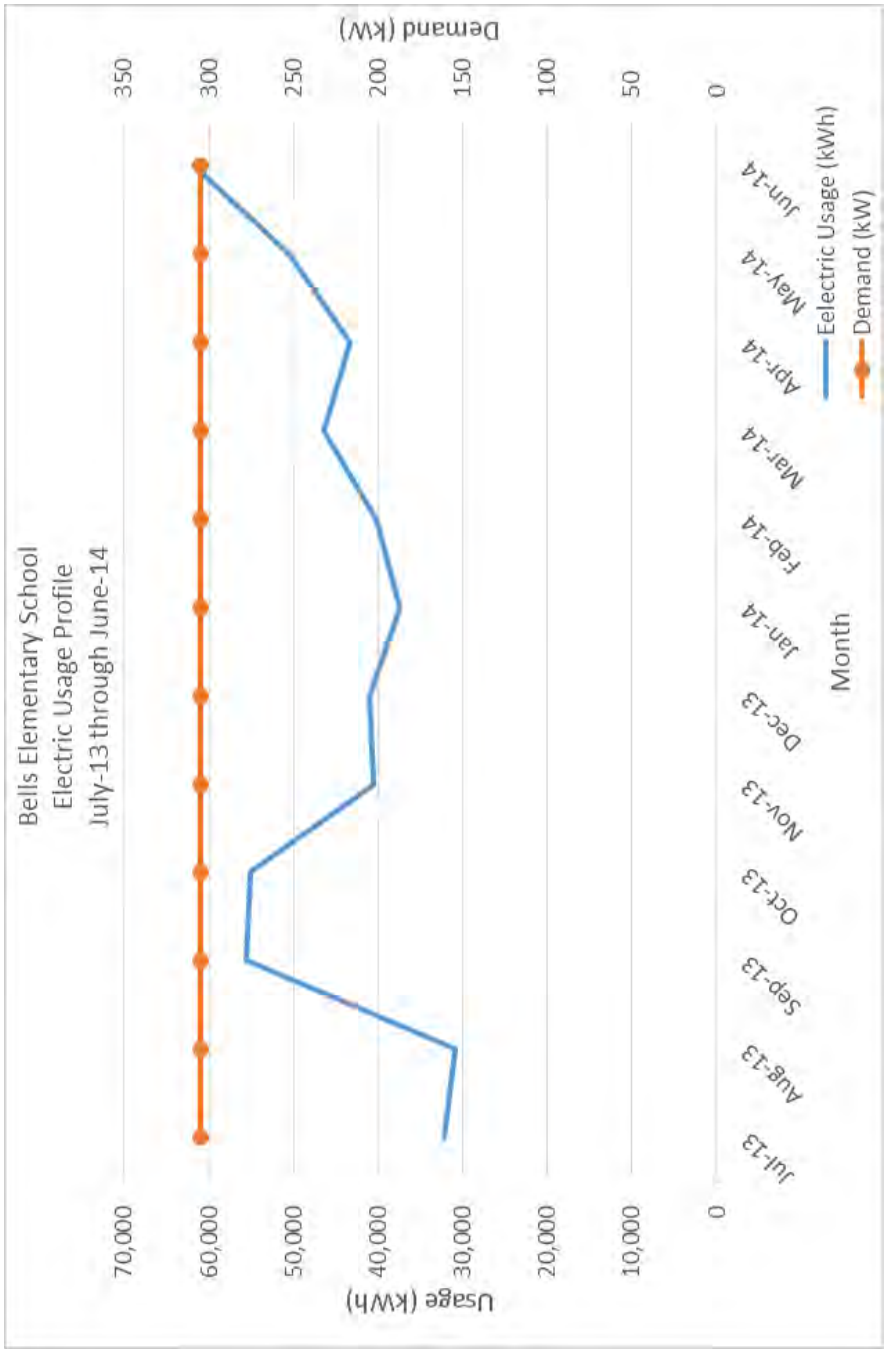


Bells Elementary School Site

Electricity – Bells Elementary School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.166/kWh based on the consumption of 534,800 kWh at a total cost of $88,638, in the previous year. The annual monthly peak demand was 304.8 kW, while the average monthly demand was 304.8 kW. The chart below shows the monthly electric usage and costs.

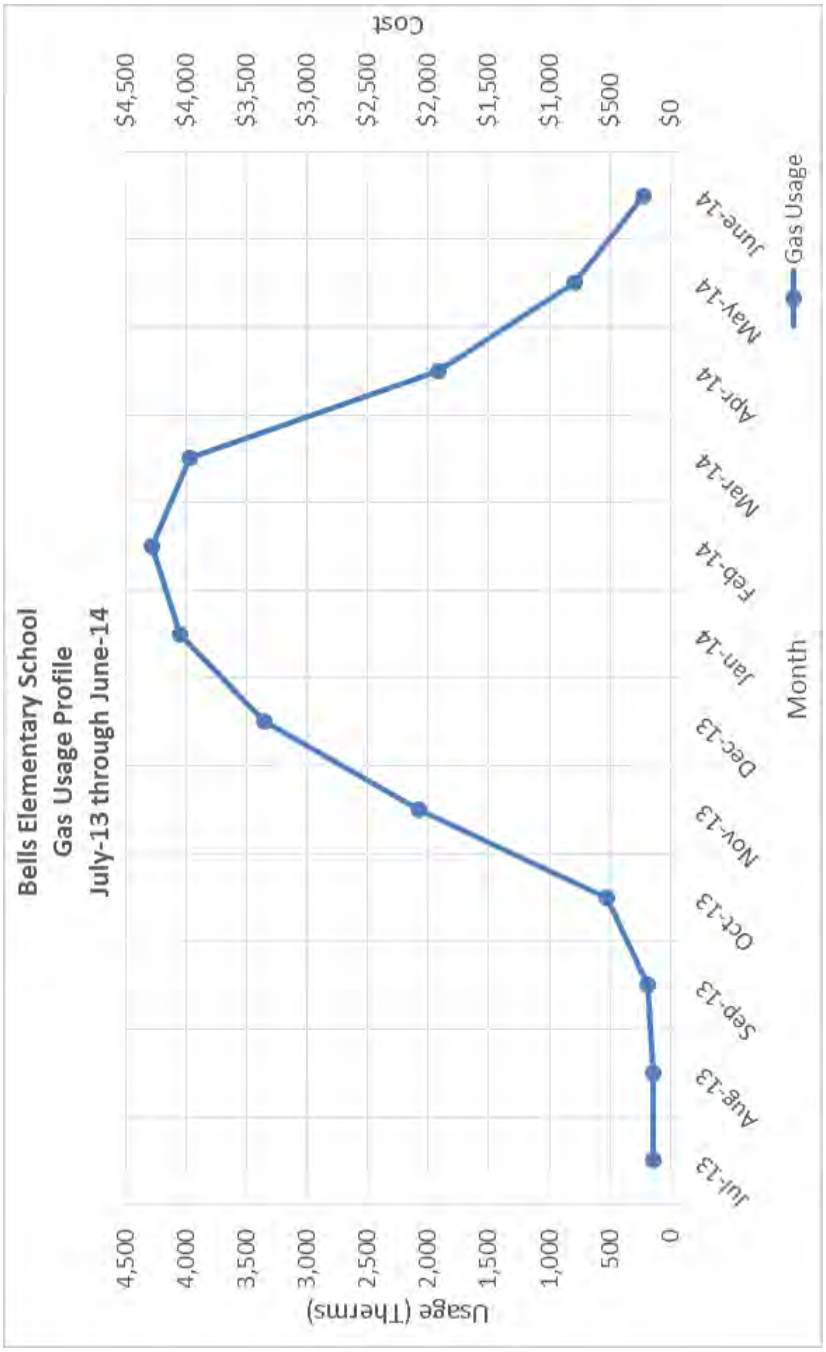
ELECTRIC USAGE SUMMARY - BELLS ELEMENTARY				
Utility Provider:	Atlantic City Electric			
Rate:	Annual General Service			
Meter No:	91706926			
Account #:	0305 3739 9997			
Third Party Utility Provider:	FirstEnergy Sol			
MONTH OF USE	**CONSUMPTION KWH**	**DEMAND KW**		**TOTAL BILL**
14-Jun	61,760	304.8		$9,289.41
14-May	50,480	304.8		$8,006.78
14-Apr	43,360	304.8		$7,276.91
14-Mar	46,480	304.8		$7,552.64
14-Feb	40,160	304.8		$6,992.09
14-Jan	37,360	304.8		$6,517.64
13-Dec	41,040	304.8		$7,330.06
13-Nov	40,480	304.8		$6,795.62
13-Oct	55,120	304.8		$8,594.44
13-Sep	55,520	304.8		$8,533.82
13-Aug	30,880	304.8		$5,811.57
13-Jul	32,160	304.8		$5,937.34
Totals	**534,800**	**304.8**	**Max**	**$88,638.34**
	AVERAGE DEMAND	**304.8**	**KW average**	
	AVERAGE RATE	**$0.166**	**$/kWh**	

Electricity Usage Profile



Natural gas – Bells Elementary School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $0.999/therm based on the consumption of 21,653 therms at a total cost of $21,645, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Birches Elementary School Site

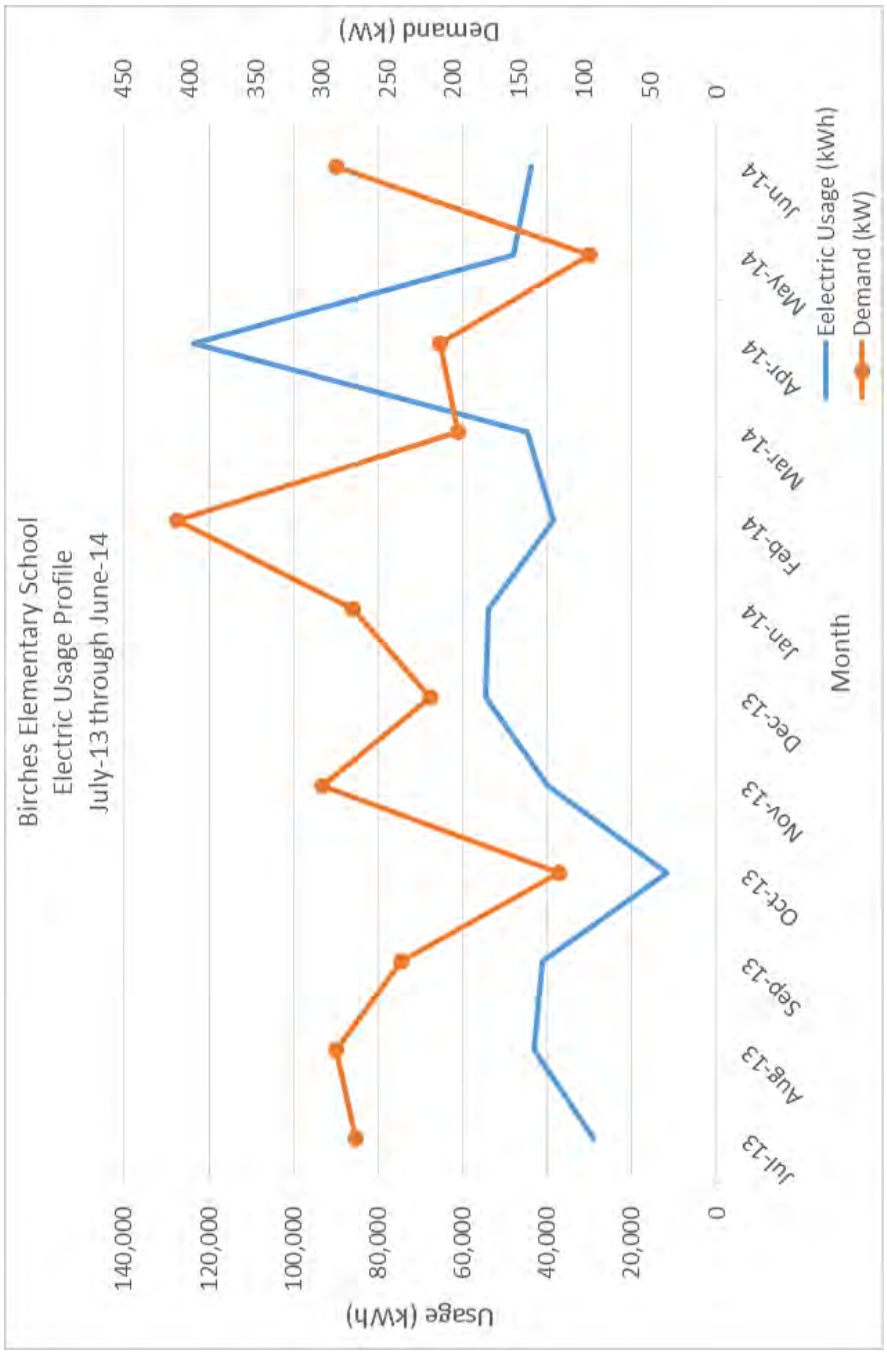
Electricity – Birches Elementary School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.149/kWh based on the consumption of 571,920 kWh at a total cost of $85,489, in the previous year. The annual monthly peak demand was 410.4 kW, while the average monthly demand was 243.3 kW. The chart below shows the monthly electric usage and costs.

ELECTRIC USAGE SUMMARY - BIRCHES ELEMENTARY

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	83221973
Account #:	0138 8539 9959
Third Party Utility Provider:	FirstEnergy Sol

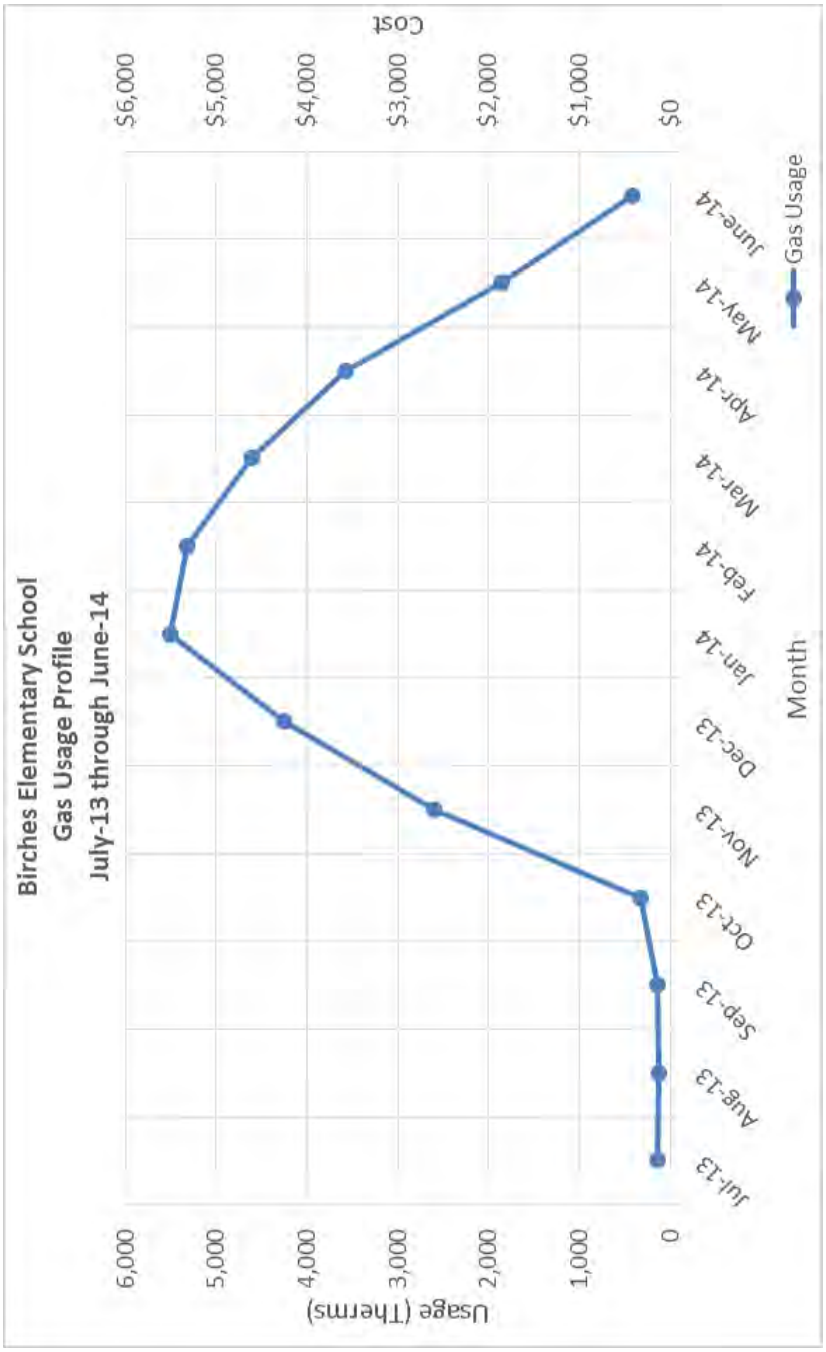
MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	43,760	288.8		$6,872.78
14-May	47,920	96.8		$7,134.17
14-Apr	123,520	210.4		$15,378.74
14-Mar	44,880	196		$5,412.02
14-Feb	38,480	410.4		$6,972.59
14-Jan	53,920	276.8		$8,224.13
13-Dec	54,560	217.6		$7,771.91
13-Nov	39,760	300		$6,447.19
13-Oct	11,840	120		$3,069.48
13-Sep	41,120	240		$6,242.25
13-Aug	43,120	288.8		$6,708.86
13-Jul	29,040	274.4		$5,254.54
Totals	**571,920**	**410.4**	**Max**	**$85,488.66**
	AVERAGE DEMAND	**243.3**	**KW average**	
	AVERAGE RATE	**$0.149**	**$/kWh**	

Electricity Usage Profile



Natural gas – Birches Elementary School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.005 /therm based on the consumption of 28,889 therms at a total cost of $29,034, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Hurffville Elementary School Site

Electricity – Hurffville Elementary School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.151/kWh based on the consumption of 652,800 kWh at a total cost of $98,280, in the previous year. The annual monthly peak demand was 264.8 kW, while the average monthly demand was 264.8 kW. The chart below shows the monthly electric usage and costs.

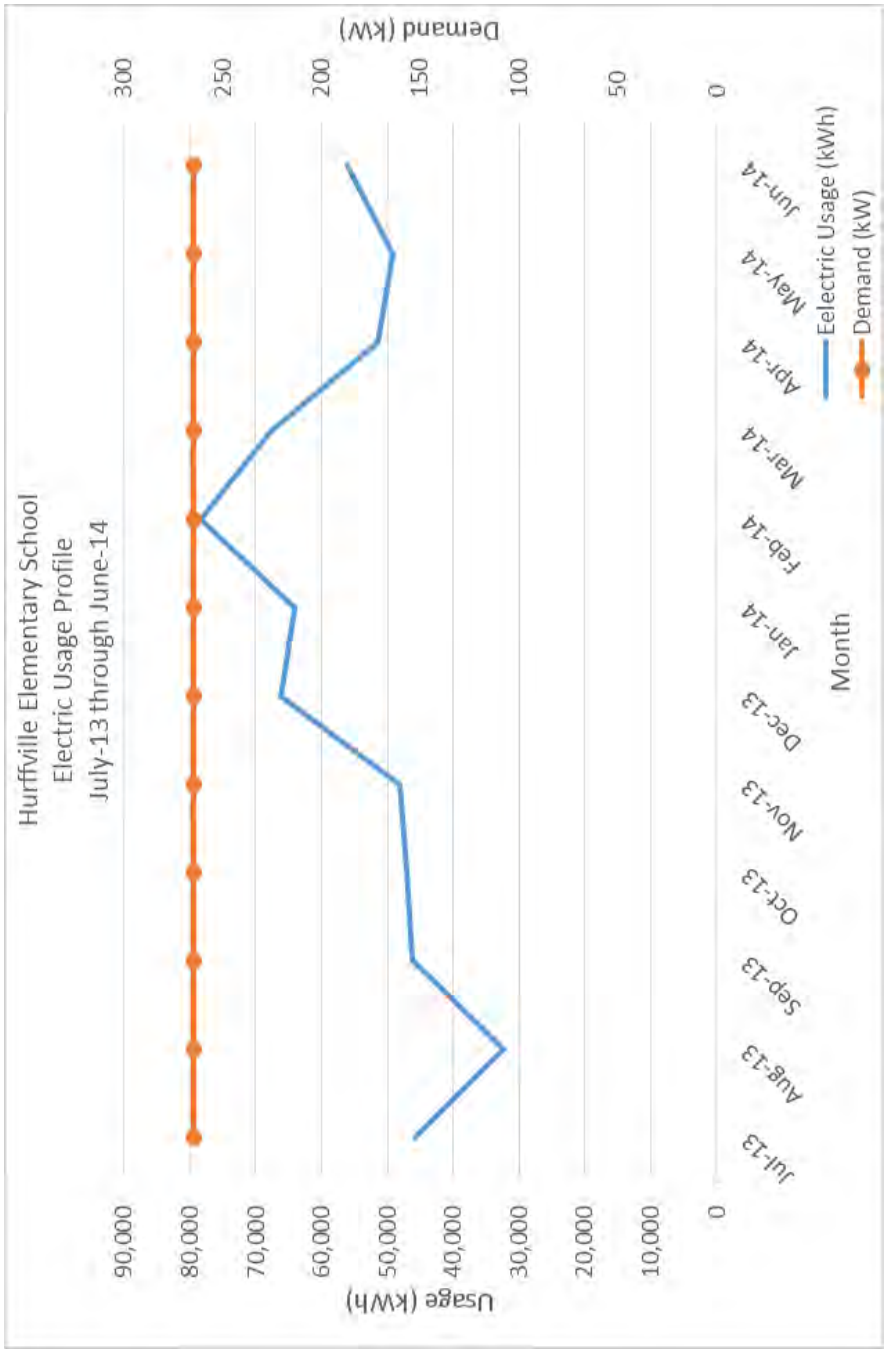
ELECTRIC USAGE SUMMARY - HURFFVILLE ELEMENTARY

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	35592629
Account #:	0286 8989 9996
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	56,080	264.8		$8,231.95
14-May	49,120	264.8		$7,552.59
14-Apr	51,600	264.8		$8,038.55
14-Mar	67,680	264.8		$9,659.74
14-Feb	78,400	264.8		$10,876.81
14-Jan	64,080	264.8		$9,525.08
13-Dec	66,160	264.8		$9,559.63
13-Nov	48,080	264.8		$7,351.80
13-Oct	47,120	264.8		$7,496.28
13-Sep	46,240	264.8		$7,168.71
13-Aug	32,320	264.8		$5,524.16
13-Jul	45,920	264.8		$7,294.52
Totals	**652,800**	**264.8**	**Max**	**$98,279.82**

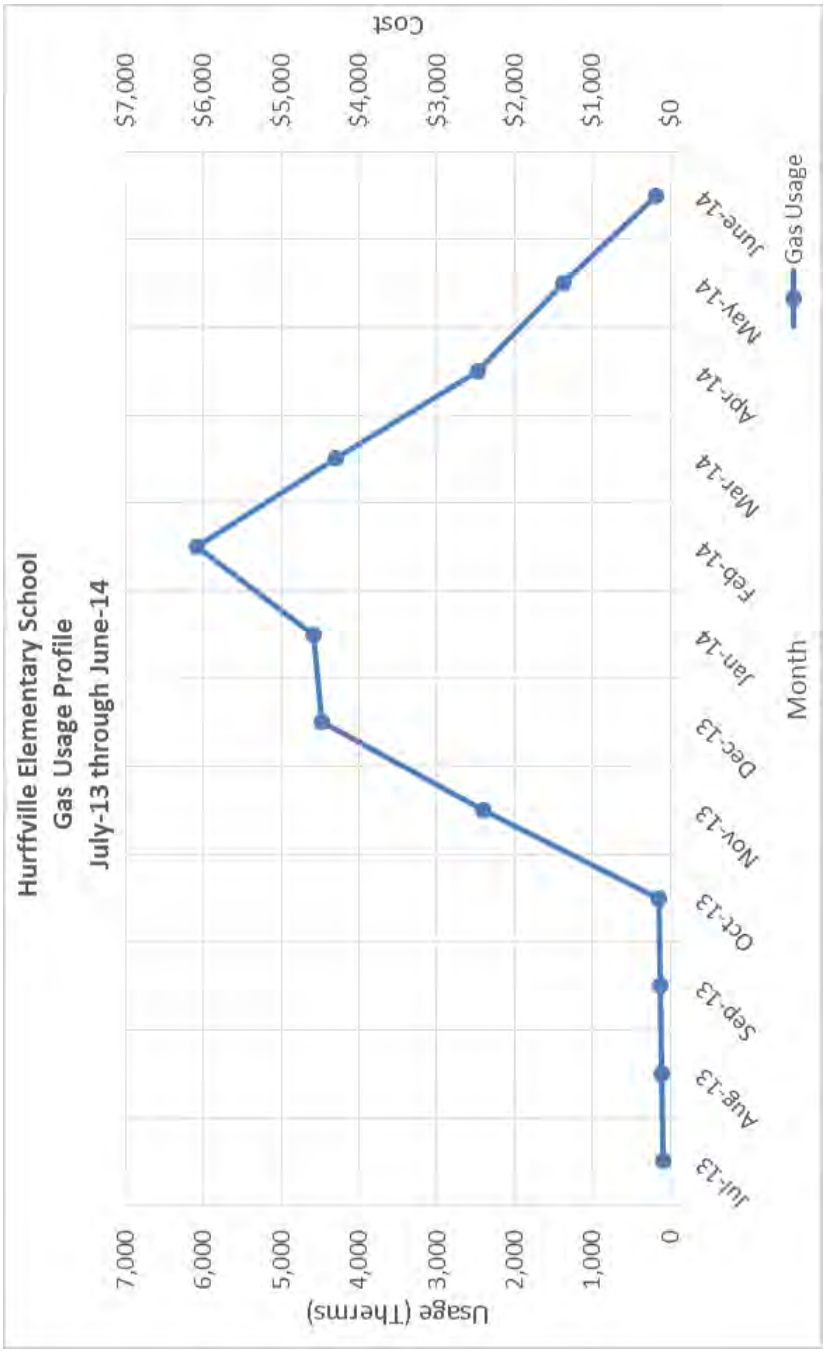
AVERAGE DEMAND	**264.8**	**KW average**
AVERAGE RATE	**$0.151**	**$/kWh**

Electricity Usage Profile



Natural gas – Hurffville Elementary School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.012/therm based on the consumption of 26,382 therms at a total cost of $26,702, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Thomas Jefferson Elementary School Site

Electricity – Thomas Jefferson Elementary School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.140/kWh based on the consumption of 1,383,200 kWh at a total cost of $193,381, in the previous year. The annual monthly peak demand was 534.0 kW, while the average monthly demand was 394.3 kW. The chart below shows the monthly electric usage and costs.

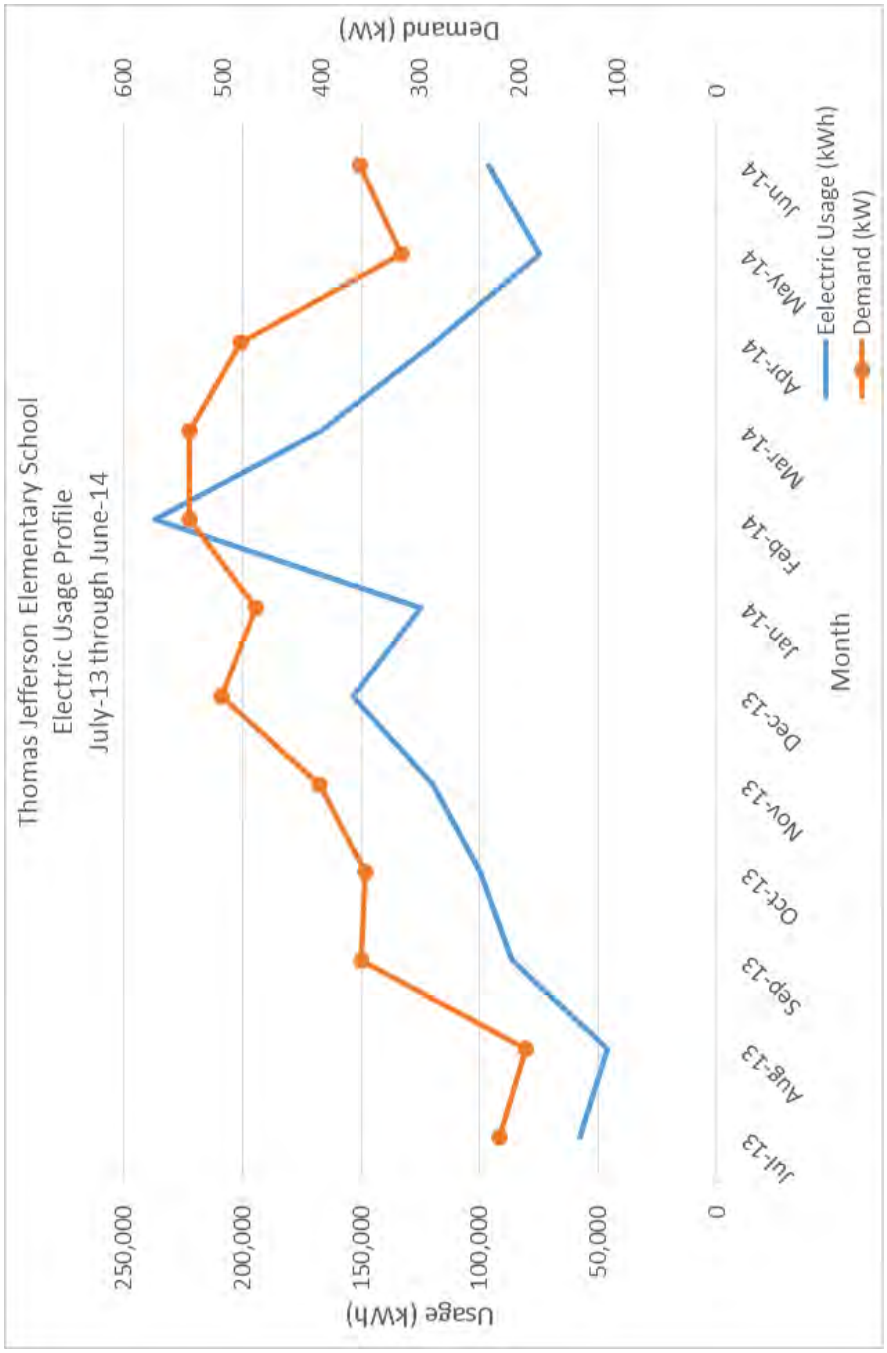
ELECTRIC USAGE SUMMARY - THOMAS JEFFERSON ELEMENTARY

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	62283714
Account #:	0246 8059 9990
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	96,200	362		$13,497.07
14-May	75,000	320		$10,873.42
14-Apr	119,200	482		$17,134.37
14-Mar	167,200	534		$23,089.23
14-Feb	237,000	534		$30,748.80
14-Jan	125,200	466		$17,469.86
13-Dec	153,400	502		$21,794.69
13-Nov	119,800	402		$16,309.26
13-Oct	99,800	356		$14,004.51
13-Sep	86,200	360		$12,413.03
13-Aug	46,400	194		$7,312.83
13-Jul	57,800	220		$8,734.42
Totals	**1,383,200**	**534.0**	**Max**	**$193,381.49**

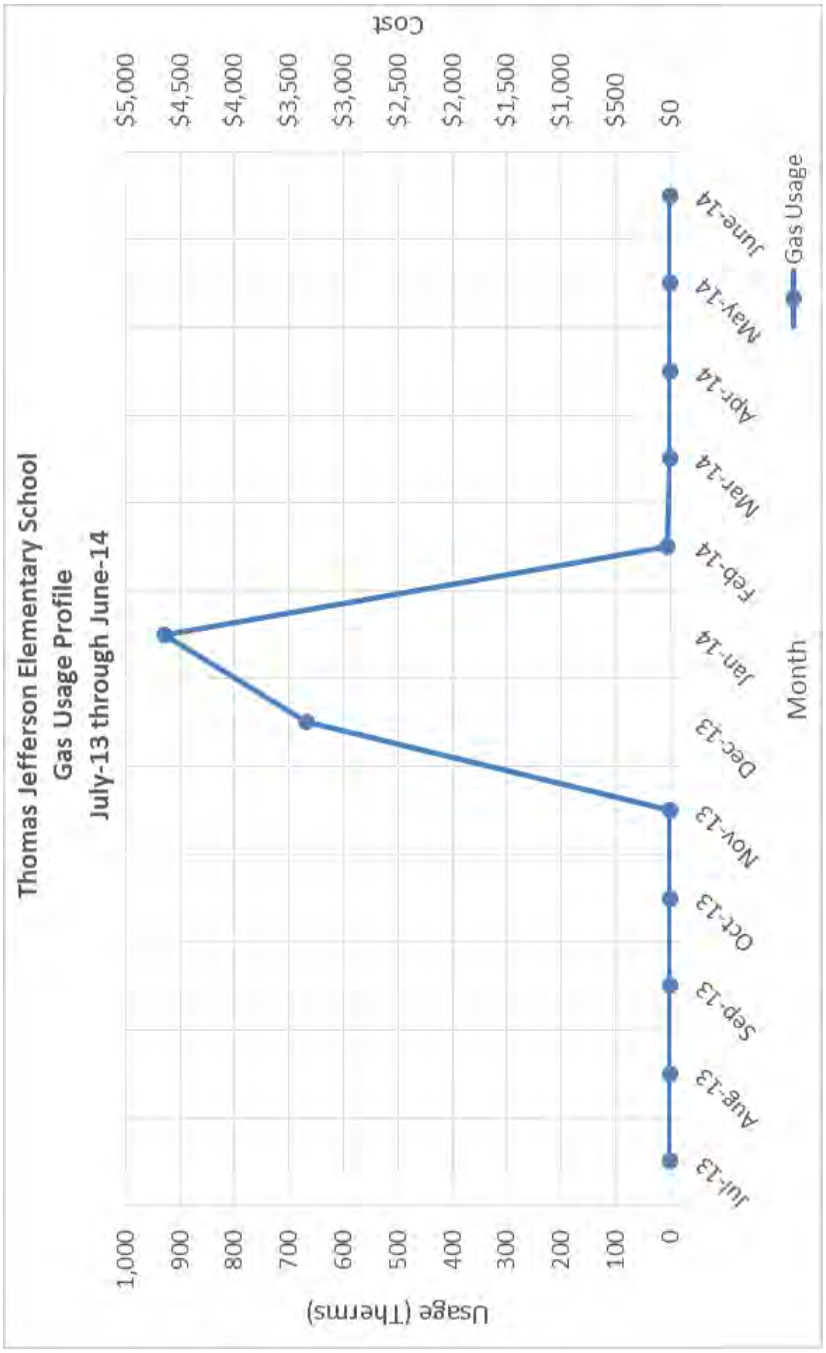
AVERAGE DEMAND	**394.3**	**KW average**
AVERAGE RATE	**$0.140**	**$/kWh**

Electricity Usage Profile



Natural gas – Thomas Jefferson Elementary School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $4.805/therm based on the consumption of 1,606 therms at a total cost of $7,714, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Wedgwood Elementary School Site

Electricity – Wedgwood Elementary School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.157/kWh based on the consumption of 563,680 kWh at a total cost of $88,694, in the previous year. The annual monthly peak demand was 320.8 kW, while the average monthly demand was 217.9 kW. The chart below shows the monthly electric usage and costs.

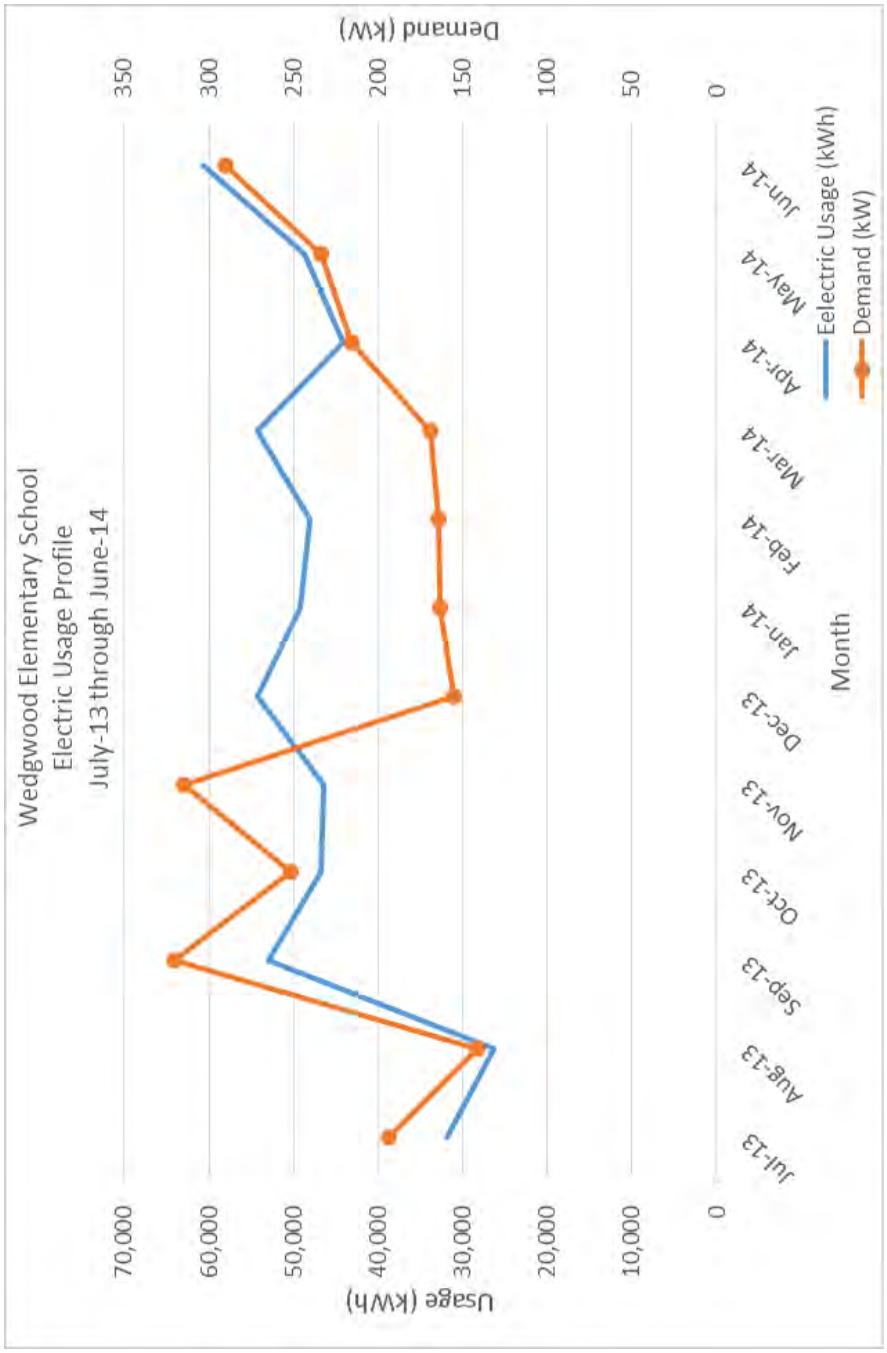
ELECTRIC USAGE SUMMARY - WEDGWOOD ELEMENTARY

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	91706880
Account #:	0286 9699 9995
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	60,720	290.4		$8,944.65
14-May	48,640	233.6		$7,472.89
14-Apr	44,160	216		$7,131.47
14-Mar	54,320	169.6		$8,154.50
14-Feb	48,080	164		$7,311.78
14-Jan	49,200	163.2		$7,771.02
13-Dec	54,240	155.2		$8,150.27
13-Nov	46,400	314.4		$7,607.29
13-Oct	46,800	252		$7,315.58
13-Sep	52,960	320.8		$8,345.38
13-Aug	26,320	141.6		$4,819.50
13-Jul	31,840	193.6		$5,670.15
Totals	**563,680**	**320.8**	**Max**	**$88,694.47**

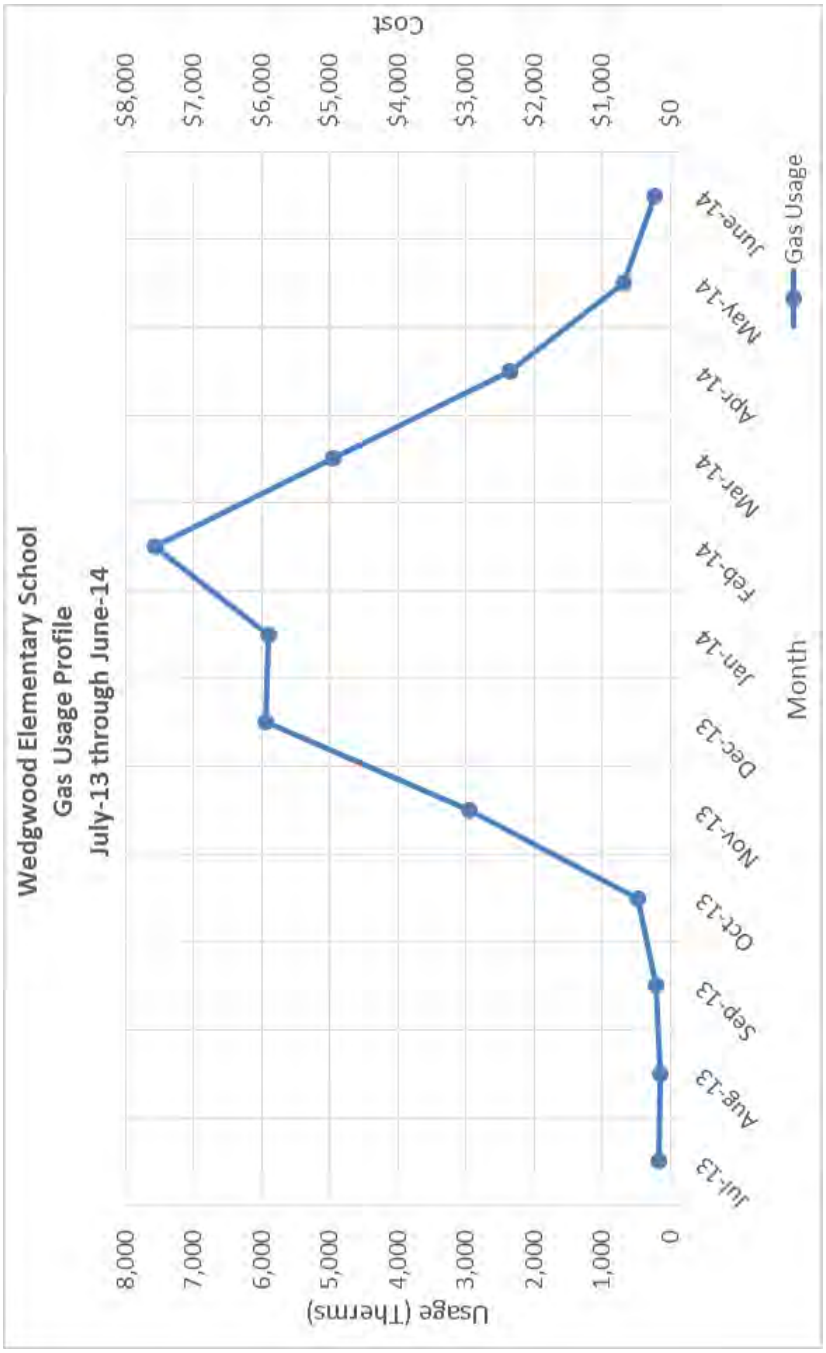
AVERAGE DEMAND	**217.9**	**KW average**
AVERAGE RATE	**$0.157**	**$/kWh**

Electricity Usage Profile



Natural gas – Wedgwood Elementary School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.000/therm based on the consumption of 31,599 therms at a total cost of $31,611, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Whitman Elementary School Site

Electricity – Whitman Elementary School is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.169/kWh based on the consumption of 567,680 kWh at a total cost of $95,713, in the previous year. The annual monthly peak demand was 349.6 kW, while the average monthly demand was 342.7 kW. The chart below shows the monthly electric usage and costs.

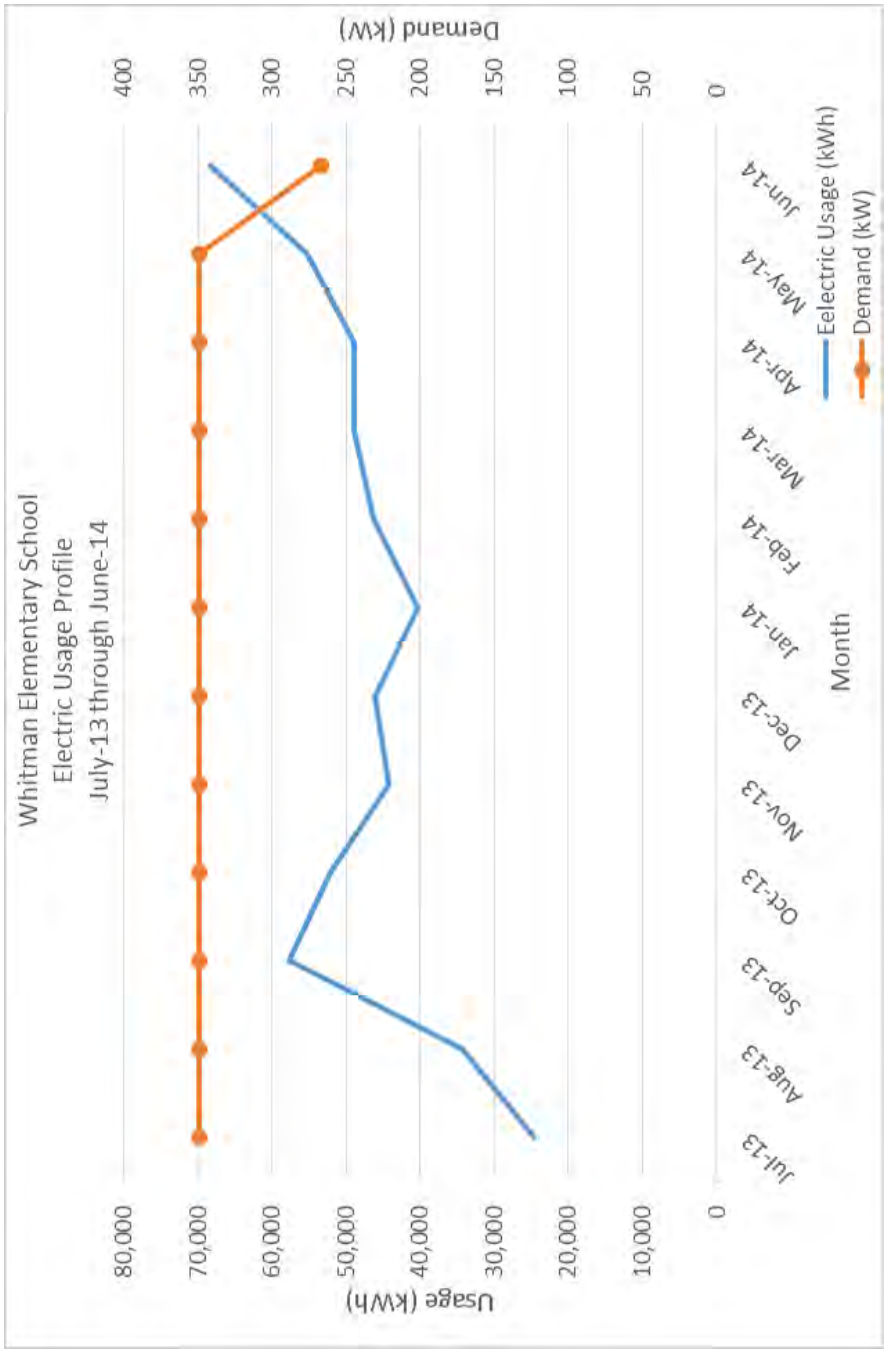
ELECTRIC USAGE SUMMARY - WHITMAN ELEMENTARY

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	12123379
Account #:	0285 2719 9997
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	68,480	267.2		$9,835.61
14-May	55,280	349.6		$8,867.91
14-Apr	48,960	349.6		$8,239.77
14-Mar	48,960	349.6		$8,150.40
14-Feb	46,320	349.6		$8,029.42
14-Jan	40,320	349.6		$7,169.92
13-Dec	46,080	349.6		$8,273.30
13-Nov	44,320	349.6		$7,537.11
13-Oct	52,160	349.6		$8,582.31
13-Sep	57,760	349.6		$9,097.20
13-Aug	34,320	349.6		$6,521.47
13-Jul	24,720	349.6		$5,408.76
Totals	**567,680**	**349.6**	**Max**	**$95,713.19**

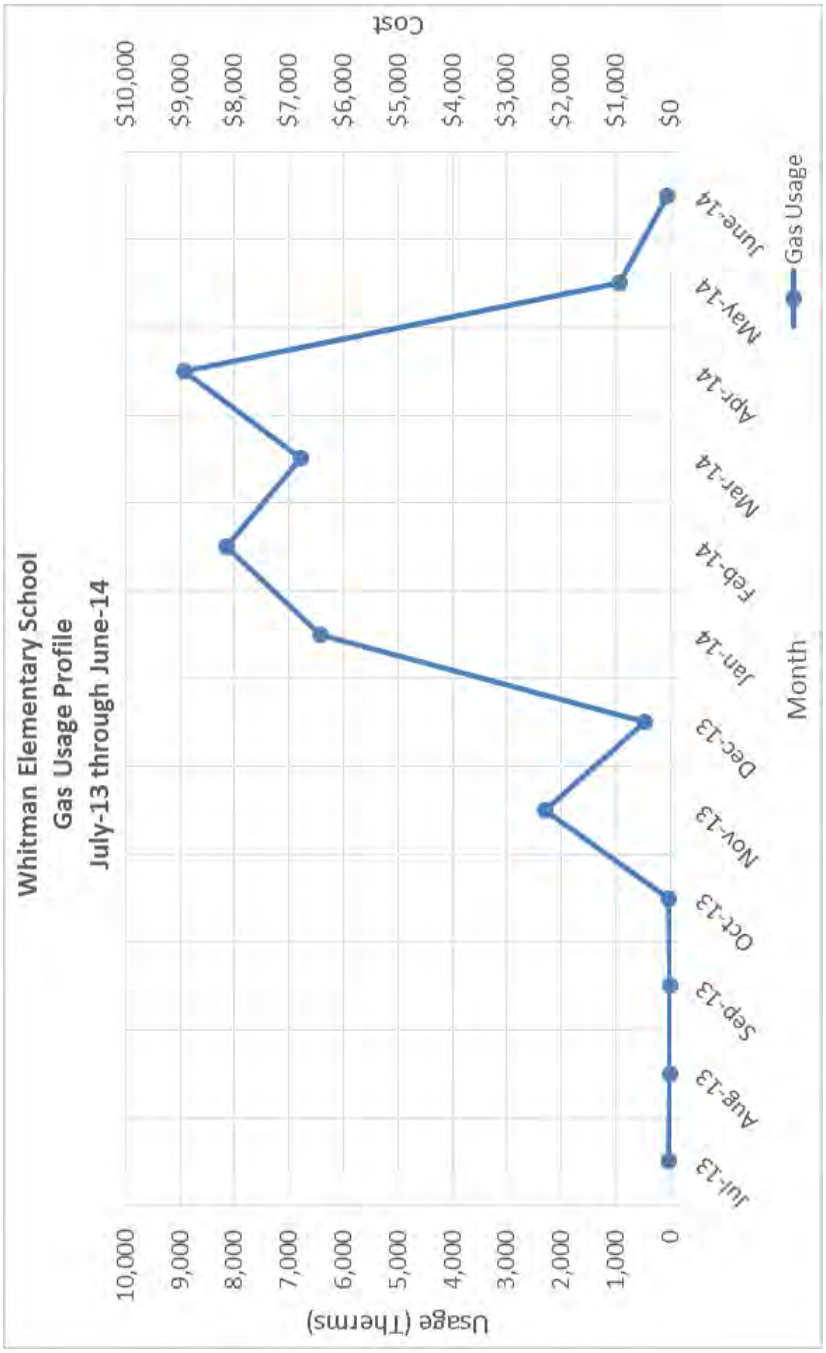
AVERAGE DEMAND	**342.7**	**KW average**
AVERAGE RATE	**$0.169**	**$/kWh**

Electricity Usage Profile



Natural gas – Whitman Elementary School is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $1.023/therm based on the consumption of 34,134 therms at a total cost of $34,918, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Grenloch ECC Site

Electricity – Grenloch ECC is currently served by a total of 1 electric meters. Electricity is purchased from Atlantic City Electric which is responsible for transmission and distribution and from FirstEnergy Sol which acts as a third party energy supplier. Electricity was purchased at an average aggregated cost of $0.165/kWh based on the consumption of 75,291 kWh at a total cost of $12,434, in the previous year. The annual monthly peak demand was 50.1 kW, while the average monthly demand was 32.9 kW. The chart below shows the monthly electric usage and costs.

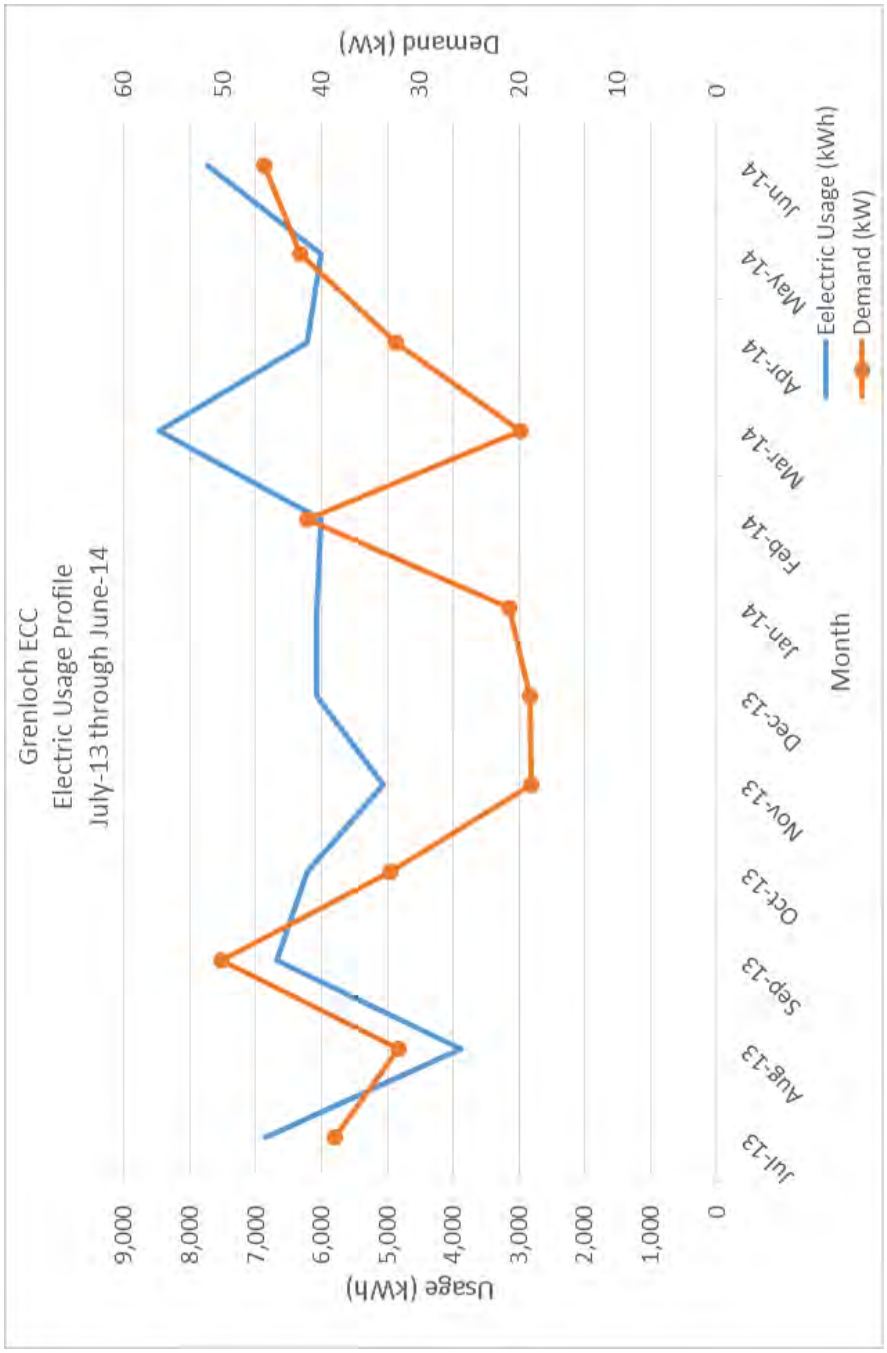
ELECTRIC USAGE SUMMARY - GRENLOCH ECC

Utility Provider:	Atlantic City Electric
Rate:	Annual General Service
Meter No:	90362108
Account #:	0268 6349 9997
Third Party Utility Provider:	FirstEnergy Sol

MONTH OF USE	CONSUMPTION KWH	DEMAND KW		TOTAL BILL
14-Jun	7,737	45.87		$1,264.88
14-May	6,010	42.24		$1,097.49
14-Apr	6,215	32.48		$1,010.36
14-Mar	8,473	19.9		$1,337.04
14-Feb	6,010	41.5		$983.76
14-Jan	6,066	20.98		$973.44
13-Dec	6,074	18.9		$971.77
13-Nov	5,059	18.79		$812.41
13-Oct	6,214	33.04		$1,024.42
13-Sep	6,693	50.14		$1,142.02
13-Aug	3,894	32.28		$669.92
13-Jul	6,846	38.64		$1,146.60
Totals	**75,291**	**50.1**	**Max**	**$12,434.12**

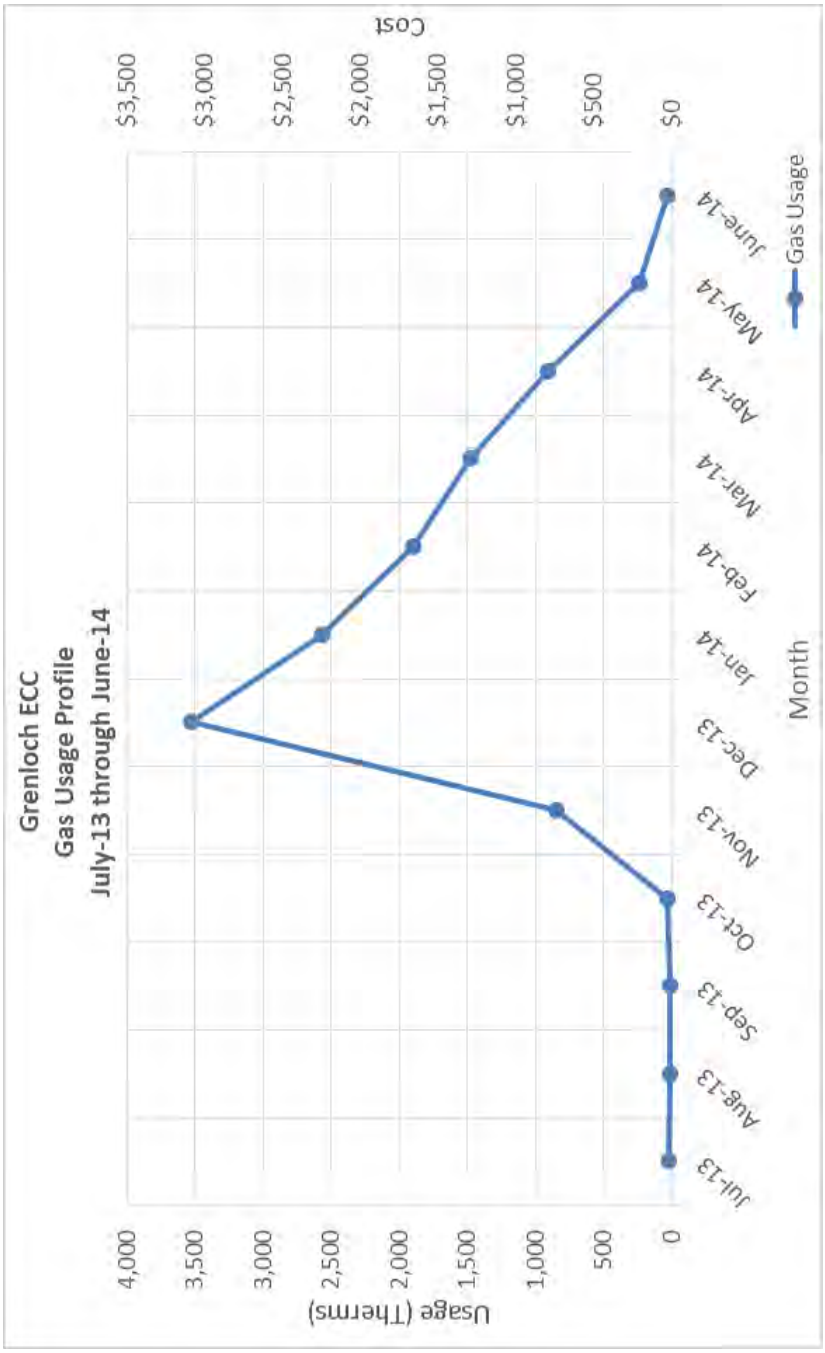
AVERAGE DEMAND	**32.9**	**KW average**
AVERAGE RATE	**$0.165**	**$/kWh**

Electricity Usage Profile



Natural gas – Grenloch ECC is currently served by 1 meters for natural gas and currently purchases natural gas from South Jersey Gas which is responsible for transmission and distribution and from Constellation Energy which acts as a third party energy supplier. Natural gas was purchased at an average aggregated cost of $0.839/therm based on the consumption of 11,567 therms at a total cost of $9,708, in the previous year. The chart below shows the monthly natural gas usage and costs.

Natural Gas Usage Profile



Appendix C - Investment Grade Lighting Audit

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Classroom (K102)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
2	1	Classroom (K103)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
3	1	Storage Closet (K104)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
4	1	Classroom (K105)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
5	1	Classroom (K106)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
6	1	Classroom (K109)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	20	1,480	2,853	C	Recessed Parabolic	4'T8	E	OS	10	4	32	6	241	20	1480	2140	0	713	713
7	1	Classroom (K110)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
8	1	Classroom (K111)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
9	1	Classroom (K112)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
10	1	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
11	1	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
12	1	Staircase	Parabolic Ceiling Mounted	E	4'T8	3	2	32	Sw	16	241	10	222	856	T8-BL	Parabolic Ceiling Mounted	4'T8	E	BL	3	2	32	10	241	10	222	495	0	361	361
13	1	Hallway	Recessed Parabolic	E	4'T8	24	4	32	Sw	16	241	20	3,552	13,697	N/A	Recessed Parabolic	4'T8	E	Sw	24	4	32	16	241	20	3552	13697	0	0	0
14	1	Office	Recessed Parabolic	E	4'T8	10	3	32	Sw	8	241	15	1,110	2,140	C	Recessed Parabolic	4'T8	E	OS	10	3	32	6	241	15	1110	1605	0	535	535
15	1	Classroom (I102)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
16	1	Classroom (I103)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
17	1	Storage Closet (I104)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
18	1	Classroom (I105)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
19	1	Classroom (I106)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
20	1	Classroom (I109)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	20	1,480	2,853	C	Recessed Parabolic	4'T8	E	OS	10	4	32	6	241	20	1480	2140	0	713	713
21	1	Classroom (I110)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
22	1	Classroom (I111)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
23	1	Classroom (I112)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
24	1	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
25	1	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
26	1	Staircase	Parabolic Ceiling Mounted	E	4'T8	3	2	32	Sw	16	241	10	222	856	T8-BL	Parabolic Ceiling Mounted	4'T8	E	BL	3	2	32	10	241	10	222	495	0	361	361
27	1	Hallway	Recessed Parabolic	E	4'T8	24	4	32	Sw	16	241	20	3,552	13,697	N/A	Recessed Parabolic	4'T8	E	Sw	24	4	32	16	241	20	3552	13697	0	0	0
28	1	Office	Recessed Parabolic	E	4'T8	10	3	32	Sw	8	241	15	1,110	2,140	C	Recessed Parabolic	4'T8	E	OS	10	3	32	6	241	15	1110	1605	0	535	535
29	1	Classroom (L102)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
30	1	Classroom (L103)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
31	1	Storage Closet (L104)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
32	1	Classroom (L105)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
33	1	Classroom (L106)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
34	1	Classroom (L109)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	20	1,480	2,853	C	Recessed Parabolic	4'T8	E	OS	10	4	32	6	241	20	1480	2140	0	713	713
35	1	Classroom (L110)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
36	1	Classroom (L111)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
37	1	Classroom (L112)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
38	1	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
39	1	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
40	1	Staircase	Parabolic Ceiling Mounted	E	4'T8	3	2	32	Sw	16	241	10	222	856	T8-BL	Parabolic Ceiling Mounted	4'T8	E	BL	3	2	32	10	241	10	222	495	0	361	361
41	1	Hallway	Recessed Parabolic	E	4'T8	24	4	32	Sw	16	241	20	3,552	13,697	N/A	Recessed Parabolic	4'T8	E	Sw	24	4	32	16	241	20	3552	13697	0	0	0
42	1	Office	Recessed Parabolic	E	4'T8	10	3	32	Sw	8	241	15	1,110	2,140	C	Recessed Parabolic	4'T8	E	OS	10	3	32	6	241	15	1110	1605	0	535	535
43	2	Classroom (K201)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
44	2	Classroom (K202)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
45	2	Classroom (K203)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
46	2	Storage Closet (K204)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
47	2	Classroom (K205)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
48	2	Classroom (K206)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
49	2	Classroom (K209)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	20	1,480	2,853	C	Recessed Parabolic	4'T8	E	OS	10	4	32	6	241	20	1480	2140	0	713	713
50	2	Classroom (K210)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
51	2	Classroom (K211)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
52	2	Classroom (K212)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
53	2	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
54	2	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
55	2	Staircase	Recessed Parabolic	E	4'T8	24	4	32	Sw	16	241	20	3,552	13,697	T8-BL	Recessed Parabolic	4'T8	E	BL	24	4	32	10	241	20	3552	7922	0	5775	5775
56	2	Classroom (I201)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
57	2	Classroom (I202)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
58	2	Classroom (I203)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
59	2	Storage Closet (I204)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
60	2	Classroom (I205)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
61	2	Classroom (I206)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
62	2	Classroom (I209)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	20	1,480	2,853	C	Recessed Parabolic	4'T8	E	OS	10	4	32	6	241	20	1480	2140	0	713	713
63	2	Classroom (I210)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
64	2	Classroom (I211)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
65	2	Classroom (I212)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
66	2	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
67	2	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed Parabolic	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
68	2	Bathroom Women	Recessed Parabolic	E	4'T8	24	4	32	Sw	16	241	20	3,552	13,697	C	Recessed Parabolic	4'T8	E	OS	24	4	32	12	241	20	3552	10272	0	3424	3424
69	2	Classroom (L201)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
70	2	Classroom (L202)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
71	2	Classroom (L203)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
72	2	Storage Closet (L204)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
73	2	Classroom (L205)	Recessed Parabolic	E	4'T8	28	2	32	Sw	8	241	10	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	28	2	32	6	241	10	2072	2996	0	999	999
74	2	Classroom (L206)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
75	2	Classroom (L209)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	20	1,480	2,853	C	Recessed Parabolic	4'T8	E	OS	10	4	32	6	241	20	1480	2140	0	713	713
76	2	Classroom (L210)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
77	2	Classroom (L211)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
78	2	Classroom (L212)	Recessed Parabolic	E	4'T8	11	4	32	Sw	8	241	20	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	11	4	32	6	241	20	1628	2354	0	785	785
79	2	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
80	2	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
81	2	Staircase	Recessed Parabolic	E	4'T8	24	4	32	Sw	16	241	20	3,552	13,697	T8-BL	Recessed Parabolic	4'T8	E	BL	24	4	32	10	241	20	3552	7922	0	5775	5775
82	1	Gymnasium (H106)	High Bay	S	PSMH	35	1	320	Sw	8	241	64	13,440	25,912	T5	High Bay	4'T5	E	Sw	35	6	55	8	241	47	13198	25446	466	0	466
83	1	Gymnasium (H106)	Recessed Parabolic	E	4'T8	28	4	32	Sw	8	241	20	4,144	7,990	N/A	Recessed Parabolic	4'T8	E	Sw	28	4	32	8	241	20	4144	7990	0	0	0
84	1	Classroom (H110)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
85	1	Classroom (H110)	Recessed Parabolic	E	4'T8	22	2	32	Sw	8	241	10	1,628	3,139	C	Recessed Parabolic	4'T8	E	OS	22	2	32	6	241	10	1628	2354	0	785	785
86	1	Classroom (H111)	Recessed Parabolic	E	4'T8	24	2	32	Sw	8	241	10	1,776	3,424	C	Recessed Parabolic	4'T8	E	OS	24	2	32	6	241	10	1776	2568	0	856	856
87	1	Hallway	Recessed Parabolic	E	4'T8	11	4	32	Sw	16	241	20	1,628	6,278	N/A	Recessed Parabolic	4'T8	E	Sw	11	4	32	16	241	20	1628	6278	0	0	0
88	1	Classroom (H112)	Recessed Parabolic	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	C	Recessed Parabolic	4'T8	E	OS	15	2	32	6	241	10	1110	1605	0	535	535
89	1	Classroom (H107)	Recessed Parabolic	E	4'T8	8	3	32	Sw	8	241	15	888	1,712	C	Recessed Parabolic	4'T8	E	OS	8	3	32	6	241	15	888	1284	0	428	428
90	1	Mechanical Rm (H113)	Parabolic Ceiling Suspended	E	4'T8	16	2	32	Sw	2	241	10	1,184	571	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	16	2	32	2	241	10	1184	571	0	0	0
91	1	Storage Closet (H114)	Parabolic Ceiling Suspended	E	4'T8	6	2	32	Sw	2	241	10	444	214	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	6	2	32	2	241	10	444	214	0	0	0
92	1	Boys Locker Room ( )	Recessed Parabolic	E	4'T8	19	4	32	Sw	8	241	20	2,812	5,422	C	Recessed Parabolic	4'T8	E	OS	19	4	32	6	241	20	2812	4066	0	1355	1355
93	1	Boys Locker Room ( )	Recessed Parabolic	S	Inc	3	1	60	Sw	8	241	0	180	347	CFL	Recessed Parabolic	CFL	S	OS	3	1	20	6	241	0	60	87	231	29	260
94	1	Girls Locker Room ( )	Recessed Parabolic	E	4'T8	19	4	32	Sw	8	241	20	2,812	5,422	C	Recessed Parabolic	4'T8	E	OS	19	4	32	6	241	20	2812	4066	0	1355	1355
95	1	Girls Locker Room ( )	Recessed Parabolic	S	Inc	3	1	60	Sw	8	241	0	180	347	CFL	Recessed Parabolic	CFL	S	OS	3	1	20	6	241	0	60	87	231	29	260
96	1	Gym Office ( )	Recessed Parabolic	E	4'T8	2	3	32	Sw	8	241	15	222	428	C	Recessed Parabolic	4'T8	E	OS	2	3	32	6	241	15	222	321	0	107	107
97	1	Main Office ( )	Recessed Parabolic	E	4'T8	14	3	32	Sw	8	241	15	1,554	2,996	C	Recessed Parabolic	4'T8	E	OS	14	3	32	6	241	15	1554	2247	0	749	749
98	1	Student Council Office ( )	Recessed Parabolic	E	4'T8	3	3	32	Sw	8	241	15	333	642	C	Recessed Parabolic	4'T8	E	OS	3	3	32	6	241	15	333	482	0	161	161
99	1	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
100	1	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
101	1	Classroom (J106)	Recessed Parabolic	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	C	Recessed Parabolic	4'T8	E	OS	16	4	32	6	241	20	2368	3424	0	1141	1141
102	1	Storage Closet (J106)	Recessed Parabolic	E	4'T8	4	2	32	Sw	2	241	10	296	143	N/A	Recessed Parabolic	4'T8	E	Sw	4	2	32	2	241	10	296	143	0	0	0
103	1	Classroom (J107)	Recessed Parabolic	E	4'T8	38	4	32	Sw	8	241	20	5,624	10,843	C	Recessed Parabolic	4'T8	E	OS	38	4	32	6	241	20	5624	8132	0	2711	2711
104	1	Office (J110)	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
105	1	Office (J111)	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
106	1	Office (J112)	Recessed Parabolic	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Recessed Parabolic	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
107	1	Office (J113)	Recessed Parabolic	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed Parabolic	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
108	1	Office (J114)	Recessed Parabolic	E	4'T8	2	2	32	Sw	8	241	10	148	285	C	Recessed Parabolic	4'T8	E	OS	2	2	32	6	241	10	148	214	0	71	71
109	1	Nurse's Station	Recessed Parabolic	E	4'T8	7	4	32	Sw	8	241	20	1,036	1,997	N/A	Recessed Parabolic	4'T8	E	Sw	7	4	32	8	241	20	1036	1997	0	0	0
110	2	Storage Closet (J201)	Recessed Parabolic	S	Inc	2	1	60	Sw	2	241	0	120	58	CFL	Recessed Parabolic	CFL	S	Sw	2	1	20	2	241	0	40	19	39	0	39
111	2	Faculty Room	Parabolic Wall Mounted	E	4'T8	18	1	32	Sw	8	241	5	666	1,284	C	Parabolic Wall Mounted	4'T8	E	OS	18	1	32	6	241	5	666	963	0	321	321
112	2	Faculty Room	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	6	241	20	2516	3638	0	1213	1213
113	2	Bathroom Men	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
114	2	Bathroom Men ( )	Recessed Parabolic	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
115	2	Bathroom Women	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
116	2	Bathroom Women	Recessed Parabolic	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed Parabolic	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
117	1	Staircase	Parabolic Ceiling Mounted	E	4'T8	5	2	32	Sw	16	241	10	370	1,427	T8-BL	Parabolic Ceiling Mounted	4'T8	E	BL	5	2	32	10	241	10	370	825	0	602	602
118	1	Boys Locker Room	Recessed Parabolic	E	4'T8	19	4	32	Sw	8	241	20	2,812	5,422	C	Recessed Parabolic	4'T8	E	OS	19	4	32	6	241	20	2812	4066	0	1355	1355
119	2	Girls Locker Room	Recessed Parabolic	E	4'T8	19	4	32	Sw	8	241	20	2,812	5,422	C	Recessed Parabolic	4'T8	E	OS	19	4	32	6	241	20	2812	4066	0	1355	1355
120	2	Classroom (J207)	Recessed Parabolic	E	4'T8	14	4	32	Sw	8	241	20	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	14	4	32	6	241	20	2072	2996	0	999	999
121	2	Classroom (J209)	Recessed Parabolic	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	C	Recessed Parabolic	4'T8	E	OS	15	4	32	6	241	20	2220	3210	0	1070	1070
122	2	Classroom (J210)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
123	2	Classroom (J211)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	C	Recessed Parabolic	4'T8	E	OS	17	4	32	8	241	20	2516	3638	0	1213	1213
124	2	Classroom (J212)	Recessed Parabolic	E	4'T8	14	4	32	Sw	8	241	20	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	14	4	32	6	241	20	2072	2996	0	999	999
125	2	Classroom (J213)	Recessed Parabolic	E	4'T8	14	4	32	Sw	8	241	20	2,072	3,995	C	Recessed Parabolic	4'T8	E	OS	14	4	32	6	241	20	2072	2996	0	999	999
126	2	Classroom (H201)	Recessed Parabolic	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Recessed Parabolic	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
127	2	Classroom (H202)	Recessed Parabolic	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Recessed Parabolic	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
128	2	Classroom (H205)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
128	2	Classroom (H205)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
129	2	Classroom (H206)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
130	2	Office (H207)	Recessed Parabolic	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed Parabolic	4'T8	E	OS	3	4	32	6	241	20	444	642	0	214	214
131	1	Exterior	Wallpack	E	HPS	10	1	250	T	12	241	50	3,000	8,676	LED	Wallpack	LED	E	T	10	1	78	12	241	8	858	2481	6195	0	6195
132	1	Exterior	Wallpack	E	HPS	14	1	250	PC	12	241	50	4,200	12,146	LED	Wallpack	LED	E	PC	14	1	78	12	241	8	1201	3474	8673	0	8673
Totals:						1,529	446	5,064				2,364	206,231	447,182						1,529	451	4,335			2,263	200,528	340,817	15,835	90,531	106,365

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

Location			Existing Fixture Information											Retrofit Information											Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use (kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use (kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Kitchen	Recessed	S	CFL	12	1	13	Sw	24	365	0	156	1,367	N/A	Recessed	CFL	S	Sw	12	1	13	24	365	0	156	1367	0	0	0
2	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	365	0	39	28	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	365	0	39	28	0	0	0
3	1	Cafeteria	Ceiling Mounted	F	4'T8	4	2	32	Sw	8	365	10	296	864	N/A	Ceiling Mounted	4'T8	F	Sw	4	2	32	8	365	10	296	864	0	0	0
4	1	Teachers Lounge	Ceiling Suspended	E	4'T8	8	2	32	Sw	8	365	10	592	1,729	C	Ceiling Suspended	4'T8	E	OS	8	2	32	6	365	10	592	1296	0	432	432
5	1	Bathroom	Recessed	S	Inc	1	1	60	Sw	9	365	0	60	197	CFL	Recessed	CFL	S	Sw	1	1	20	9	365	0	20	66	131	0	131
6	1	Bathroom	Recessed	S	Inc	1	1	60	Sw	9	365	0	60	197	CFL	Recessed	CFL	S	Sw	1	1	20	9	365	0	20	66	131	0	131
7	1	Vestibule	Recessed	E	2'T8	1	2	17	Sw	16	365	4	38	222	N/A	Recessed	2'T8	E	Sw	1	2	17	16	365	4	38	222	0	0	0
8	1	Vestibule	Recessed	E	2'T8	1	2	17	Sw	16	365	4	38	222	N/A	Recessed	2'T8	E	Sw	1	2	17	16	365	4	38	222	0	0	0
9	1	Lobby showcase	Recessed	M	9'T8	1	1	59	Sw	9	365	7	68	193	N/A	Recessed	9'T8	M	Sw	1	1	59	9	365	7	68	193	0	0	0
10	1	Lobby showcase	Recessed	S	CFL	1	1	13	Sw	8	365	0	13	38	N/A	Recessed	CFL	S	Sw	1	1	13	8	365	0	13	38	0	0	0
11	1	Cafeteria	Recessed Parabolic	E	4'T8	44	4	32	Sw	12	241	20	5,512	18,833	N/A	Recessed Parabolic	4'T8	E	Sw	44	4	32	12	241	20	6512	16833	0	0	0
12	1	Cafeteria	Exit Sign	S	LED	3	1	5	N	24	365	1	17	146	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	146	0	0	0
13	1	Cafeteria	Recessed	S	CFL	6	1	13	Sw	24	241	0	78	451	N/A	Recessed	CFL	S	Sw	6	1	13	24	241	0	78	451	0	0	0
14	1	Cafeteria	Track	S	Inc	2	3	60	Sw	12	241	0	360	1,041	CFL	Track	CFL	S	Sw	2	3	20	12	241	0	120	347	694	0	694
15	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	28	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
16	1	Kitchen	Recessed	S	CFL	16	1	13	Sw	8	241	0	208	401	N/A	Recessed	CFL	S	Sw	16	1	13	8	241	0	208	401	0	0	0
17	1	Storage Room	Recessed	E	4'T8	1	4	32	Sw	2	241	20	148	71	N/A	Recessed	4'T8	E	Sw	1	4	32	2	241	20	148	71	0	0	0
18	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	241	0	39	19	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	241	0	39	19	0	0	0
19	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
20	1	Kitchen	Ceiling Mounted	E	4'T8	11	2	32	Sw	8	241	10	814	1,569	N/A	Ceiling Mounted	4'T8	E	Sw	11	2	32	8	241	10	814	1569	0	0	0
21	1	Locker Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
22	1	Kitchen	Ceiling Mounted	E	4'T8	6	2	32	Sw	8	241	10	444	856	C	Ceiling Mounted	4'T8	E	OS	6	2	32	8	241	10	444	642	0	214	214
23	1	Boiler Room	Ceiling Mounted	E	4'T8	10	2	32	Sw	2	241	10	740	357	N/A	Ceiling Mounted	4'T8	E	Sw	10	2	32	2	241	10	740	357	0	0	0
24	1	Boiler Room	Exit Sign	S	LED	2	1	5	N	24	365	1	11	98	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	98	0	0	0
25	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	24	241	10	74	428	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	24	241	10	74	428	0	0	0
26	1	Lobby	Recessed	E	4'T8	6	6	32	Sw	8	241	40	1,779	3,424	N/A	Recessed	4'T8	E	Sw	6	6	32	8	241	40	1776	3424	0	0	0
27	1	Lobby	Exit Sign	S	LED	3	1	5	N	24	365	1	17	146	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	146	0	0	0
28	1	Office Area-Attendance	Ceiling Mounted	E	4'T8	2	2	32	Sw	24	241	10	148	856	C	Ceiling Mounted	4'T8	E	OS	2	2	32	18	241	10	148	642	0	214	214
29	1	Nurse's Station	Ceiling Suspended	E	4'T8	10	2	32	Sw	8	241	10	740	1,427	N/A	Ceiling Suspended	4'T8	E	Sw	10	2	32	8	241	10	740	1427	0	0	0
30	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	9	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	9	241	0	13	25	0	0	0
31	1	Copy Room	Recessed	E	4'T8	2	2	32	Sw	2	241	10	148	71	N/A	Recessed	4'T8	E	Sw	2	2	32	2	241	10	148	71	0	0	0
32	1	Classroom-Guidance	Recessed	E	4'T8	8	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	8	4	32	8	241	20	888	1712	0	0	0
33	1	Office	Recessed	E	4'T8	17	2	32	Sw	8	241	10	1,258	2,425	N/A	Recessed	4'T8	E	Sw	17	2	32	8	241	10	1258	2426	0	0	0
34	1	Office	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
35	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
36	1	Principal Office	Recessed	E	4'T8	5	2	32	Sw	8	241	10	370	713	N/A	Recessed	4'T8	E	Sw	5	2	32	8	241	10	370	713	0	0	0
37	1	Principal Office	Track	S	CFL	1	3	13	Sw	8	241	0	39	75	N/A	Track	CFL	S	Sw	1	3	13	8	241	0	39	75	0	0	0
38	1	Principal Office	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
39	1	Principals Office Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
40	1	Principals Office Bathroom	Wall Mounted	E	2'T8	1	1	17	Sw	4	241	2	18	18	N/A	Wall Mounted	2'T8	E	Sw	1	1	17	4	241	2	19	19	0	0	0
41	1	Office Area	Ceiling Suspended	E	4'T8	2	2	32	Sw	8	241	10	148	285	N/A	Ceiling Suspended	4'T8	E	Sw	2	2	32	8	241	10	148	285	0	0	0
42	1	Bathroom Men	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
43	1	Bathroom Women	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
44	1	Bathroom Women	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
45	1	Bathroom Men	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
46	1	Classroom	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,664	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1664	2996	0	0	0
47	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
48	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
49	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
50	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
51	1	Backstage Area	Ceiling Suspended	S	CFL	7	1	13	Sw	4	241	0	91	88	N/A	Ceiling Suspended	CFL	S	Sw	7	1	13	4	241	0	91	88	0	0	0
52	1	Backstage Area	Ceiling Suspended	S	Inc	1	1	60	Sw	4	241	0	60	58	CFL	Ceiling Suspended	CFL	S	Sw	1	1	20	4	241	0	20	19	39	0	39
53	1	Backstage Area	Ceiling Suspended	E	4'T8	10	4	32	Sw	4	241	20	1,480	1,427	C	Ceiling Suspended	4'T8	E	OS	10	4	32	3	241	20	1480	1070	0	357	357
54	1	Backstage Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
55	1	Backstage Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
56	1	Classroom	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,664	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1664	2996	0	0	0
57	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
58	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
59	1	Classroom	Ceiling Suspended	E	4'T8	16	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	16	2	32	8	241	10	1110	2140	0	0	0
60	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
61	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
62	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
63	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
64	1	Classroom	Ceiling Suspended	E	4'T8	16	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	16	2	32	8	241	10	1110	2140	0	0	0
65	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
66	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
67	1	Receiving Room	Ceiling Suspended	E	4'T8	5	2	32	Sw	3	241	10	370	178	N/A	Ceiling Suspended	4'T8	E	Sw	5	2	32	3	241	10	370	178	0	0	0
68	1	Copy room	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	8	241	10	148	285	0	0	0
69	1	Gymnasium	High Bay	S	MH	16	1	150	Sw	12	241	42	2,880	8,329	T6	High Bay	4'T5	E	Sw	16	4	28	12	241	16	1820	5552	2777	0	2777
70	1	Gymnasium	Exit Sign	S	LED	2	1	5	N	24	365	1	11	98	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	98	0	0	0
71	1	Bathroom Men	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
72	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
73	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
74	1	Bathroom Women	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
75	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
76	1	Storage Room	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
77	1	Office	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
78	1	Computer Lab	Recessed	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	N/A	Recessed	4'T8	E	Sw	15	4	32	8	241	20	2220	4280	0	0	0
79	1	Office	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
80	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0

Location			Existing Fixture Information											Retrofit Information											Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use (kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use (kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
80	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
81	1	Classroom	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
82	1	Classroom	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
83	1	Classroom	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
84	1	Classroom	Recessed	E	4'T8	5	4	32	Sw	8	241	20	740	1,427	N/A	Recessed	4'T8	E	Sw	5	4	32	8	241	20	740	1427	0	0	0
85	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
86	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	4	241	10	74	71	0	0	0
87	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	4	241	10	74	71	0	0	0
88	1	Bathroom Boy	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	8	241	10	74	107	0	36	36
89	1	Bathroom Girl	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	145	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	8	241	10	74	107	0	36	36
90	1	Bathroom Girl	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	8	241	20	444	642	0	214	214
91	1	Bathroom Boy	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	8	241	20	444	642	0	214	214
92	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	9	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	9	241	20	1776	3424	0	0	0
93	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	9	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	9	241	20	1776	3424	0	0	0
94	1	Classroom	Recessed	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	N/A	Recessed	4'T8	E	Sw	16	4	32	8	241	20	2368	4566	0	0	0
95	1	Classroom	Recessed	E	4'T8 U-Shaped	4	2	32	Sw	8	241	10	296	571	N/A	Recessed	4'T8 U-Shaped	E	Sw	4	2	32	8	241	10	296	571	0	0	0
96	1	Storage Room	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
97	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
98	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	9	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	9	241	20	1776	3424	0	0	0
99	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
100	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
101	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
102	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
103	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	9	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	9	241	20	1776	3424	0	0	0
104	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	9	241	5	666	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	9	241	5	666	1070	0	0	0
105	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	9	241	5	666	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	9	241	5	666	1070	0	0	0
106	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	9	241	5	666	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	9	241	5	666	1070	0	0	0
107	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	9	241	5	666	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	9	241	5	666	1070	0	0	0
108	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	666	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	9	241	5	666	1070	0	0	0
109	1	Janitor's Closet	Ceiling Suspended	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Ceiling Suspended	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
110	1	Bathroom Men	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
111	1	Bathroom Women	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
112	1	Bathroom Women	Recessed	S	CFL	1	1	13	Sw	0	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	0	241	0	13	25	0	0	0
113	1	Bathroom Men	Recessed	S	CFL	1	1	13	Sw	0	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	0	241	0	13	25	0	0	0
114	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	12	241	4	266	768	N/A	Recessed	2'T8	E	Sw	7	2	17	12	241	4	266	768	0	0	0
115	1	Hallway	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
116	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	666	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	666	1070	0	0	0
117	1	Library	Ceiling Mounted	E	4'T8	48	2	32	Sw	8	241	10	3,552	6,848	N/A	Ceiling Mounted	4'T8	E	Sw	48	2	32	8	241	10	3552	6848	0	0	0
118	1	Library	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
119	1	Office Area	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	241	10	296	571	0	0	0
120	1	Storage Room	Ceiling Suspended	S	CFL	2	1	13	Sw	2	241	0	26	13	N/A	Ceiling Suspended	CFL	S	Sw	2	1	13	2	241	0	26	13	0	0	0
121	1	Bathroom	Ceiling Mounted	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
122	1	Library	Ceiling Mounted	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
123	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
124	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
125	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
126	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
127	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
128	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
129	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
130	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
131	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
132	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
133	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
134	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
135	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
136	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
137	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
138	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
139	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
140	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
141	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
142	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
143	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
144	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
145	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
146	1	Janitor's Closet	Ceiling Suspended	E	4'T8	4	2	32	Sw	2	241	10	296	143	N/A	Ceiling Suspended	4'T8	E	Sw	4	2	32	2	241	10	296	143	0	0	0
147	1	Bathroom	Vanity	E	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
148	1	Bathroom	Vanity	E	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
149	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	12	241	0	13	38	N/A	Recessed	CFL	E	Sw	1	1	13	12	241	0	13	38	0	0	0
150	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	12	241	0	13	38	N/A	Recessed	CFL	E	Sw	1	1	13	12	241	0	13	38	0	0	0
151	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
152	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
153	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
154	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
155	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
156	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
157	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
159	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
159	Ext	Exterior	Wallpack	S	HPS	17	1	250	T	12	365	50	5,100	22,338	PSMH	Wallpack	PSMH	S	T	17	1	150	12	365	50	3060	13403	8935	0	8935
160	Ext	Exterior	Wallpack	S	HPS	10	1	150	T	12	365	35	1,900	7,884	PSMH	Wallpack	PSMH	S	T	10	1	100	12	365	35	1260	5256	2628	0	2628
161	Ext	Exterior	Pole Mounted	S	HPS	7	1	400	PC	12	365	80	3,360	14,717	PSMH	Pole Mounted	PSMH	S	PC	7	1	250	12	365	80	2100	9198	5519	0	5519
Totals:						872	321	4,948					1,421	83,795	193,411						872	324	4,288			1,335	78,495	170,446	26,893	2,073	22,988

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

Location			Existing Fixture Information												Retrofit Information													Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Hallway	Recessed Parabolic	E	4'T8	35	4	32	Sw	16	241	20	5,180	19,974	C	Recessed Parabolic	4'T8	E	OS	35	4	32	12	241	20	5180	14981	0	4994	4994
2	1	Staircase	Parabolic Ceiling Mounted	E	4'T8	6	4	32	Sw	16	241	20	888	3,424	T8-BL	Parabolic Ceiling Mounted	4'T8	E	BL	6	4	32	10	241	20	888	1980	0	1444	1444
3	1	Classroom (G102)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	C	Recessed Parabolic	4'T8	E	OS	12	4	32	6	241	20	1776	2568	0	856	856
4	1	Classroom (G104)	Recessed Parabolic	E	4'T8	20	4	32	Sw	8	241	20	2,960	5,707	C	Recessed Parabolic	4'T8	E	OS	20	4	32	6	241	20	2960	4280	0	1427	1427
5	1	Classroom (G106)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
6	1	Library	Recessed Parabolic	E	4'T8	68	6	32	Sw	8	241	30	15,096	29,105	N/A	Recessed Parabolic	4'T8	E	Sw	68	6	32	8	241	30	15096	29105	0	0	0
7	1	Library	Recessed Parabolic	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Recessed Parabolic	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
8	1	Library Office	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	C	Recessed Parabolic	4'T8	E	OS	12	4	32	6	241	20	1776	2568	0	856	856
9	1	Library Classroom	Recessed Parabolic	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	C	Recessed Parabolic	4'T8	E	OS	16	4	32	6	241	20	2368	3424	0	1141	1141
10	1	Library Storage Closet	Parabolic Ceiling Mounted	E	4'T8	12	4	32	Sw	2	241	20	1,776	856	N/A	Parabolic Ceiling Mounted	4'T8	E	Sw	12	4	32	2	241	20	1776	856	0	0	0
11	1	Library Bathroom Men	Parabolic Ceiling Mounted	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	C	Parabolic Ceiling Mounted	4'T8 U-Shaped	E	OS	2	2	32	6	241	10	148	214	0	71	71
12	1	Library Bathroom Women	Parabolic Ceiling Mounted	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	C	Parabolic Ceiling Mounted	4'T8 U-Shaped	E	OS	2	2	32	6	241	10	148	214	0	71	71
13	1	Storage Closet (G106)	Recessed Parabolic	E	4'T8	1	4	32	Sw	2	241	20	148	71	N/A	Recessed Parabolic	4'T8	E	Sw	1	4	32	2	241	20	148	71	0	0	0
14	1	Classroom (G108)	Recessed Parabolic	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	C	Recessed Parabolic	4'T8	E	OS	15	4	32	6	241	20	2220	3210	0	1070	1070
15	1	Bathroom Men	Recessed Parabolic	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	C	Recessed Parabolic	4'T8	E	OS	6	4	32	6	241	20	888	1284	0	428	428
16	1	Bathroom Women	Recessed Parabolic	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	C	Recessed Parabolic	4'T8	E	OS	6	4	32	6	241	20	888	1284	0	428	428
17	1	Auditorium - Hallway	Recessed Parabolic	E	4'T8 U-Shaped	38	2	32	Sw	16	241	10	2,812	10,843	N/A	Recessed Parabolic	4'T8 U-Shaped	E	Sw	38	2	32	16	241	10	2812	10843	0	0	0
18	1	Auditorium - Hallway	Recessed	E	Quartz Halogen	85	1	150	D	16	241	30	15,300	58,997	N/A	Recessed	Quartz Halogen	E	D	85	1	150	16	241	30	15300	58997	0	0	0
19	1	Auditorium - Hallway	Recessed	E	Quartz Halogen	38	1	250	D	16	241	50	11,400	43,958	N/A	Recessed	Quartz Halogen	E	D	38	1	250	16	241	50	11400	43958	0	0	0
20	1	Auditorium - Hallway	Recessed	E	Quartz Halogen	25	1	500	D	16	241	100	15,000	57,840	N/A	Recessed	Quartz Halogen	E	D	25	1	500	16	241	100	15000	57840	0	0	0
21	1	Backstage Area	Wall Mounted	E	Quartz Halogen	4	1	300	Sw	8	241	60	1,440	2,776	N/A	Wall Mounted	Quartz Halogen	E	Sw	4	1	300	8	241	60	1440	2776	0	0	0
22	1	Backstage Area	Wall Mounted	E	Hal	20	1	90	D	8	241	20	2,196	4,234	CFL	Wall Mounted	CFL	E	D	20	1	30	8	241	0	600	1157	3077	0	3077
23	1	Staircase	Ceiling Mounted	S	CFL	7	1	13	Sw	2	241	0	91	44	N/A	Ceiling Mounted	CFL	S	Sw	7	1	13	2	241	0	91	44	0	0	0
24	1	Boys Locker Room	Recessed Parabolic	E	4'T8	8	2	32	Sw	8	241	10	592	1,141	C	Recessed Parabolic	4'T8	E	OS	8	2	32	6	241	10	592	856	0	285	285
25	1	Boys Locker Room	Vanity	S	Inc	60	1	60	D	8	241	0	3,600	6,941	CFL	Vanity	CFL	S	D	60	1	20	8	241	0	1200	2314	4627	0	4627
26	1	Girls Locker Room	Recessed Parabolic	E	4'T8	8	2	32	Sw	8	241	10	592	1,141	C	Recessed Parabolic	4'T8	E	OS	8	2	32	6	241	10	592	856	0	285	285
27	1	Girls Locker Room	Vanity	S	Inc	60	1	60	D	8	241	0	3,600	6,941	CFL	Vanity	CFL	S	D	60	1	20	8	241	0	1200	2314	4627	0	4627
28	1	Staircase	Parabolic Ceiling Mounted	E	4'T8	6	2	32	Sw	16	241	10	444	1,712	T8-BL	Parabolic Ceiling Mounted	4'T8	E	BL	6	2	32	10	241	10	444	990	0	722	722
29	1	Storage Closet	Parabolic Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Parabolic Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
30	1	Mechanical Rm	Ceiling Suspended	E	4'T8	20	1	32	Sw	2	241	5	740	357	N/A	Ceiling Suspended	4'T8	E	Sw	20	1	32	2	241	5	740	357	0	0	0
31	1	Office (G110)	Recessed Parabolic	E	4'T8	20	4	32	Sw	8	241	20	2,960	5,707	C	Recessed Parabolic	4'T8	E	OS	20	4	32	6	241	20	2960	4280	0	1427	1427
32	1	Office (G110)	Recessed Parabolic	E	4'T8 U-Shaped	14	2	32	Sw	8	241	10	1,036	1,997	C	Recessed Parabolic	4'T8 U-Shaped	E	OS	14	2	32	6	241	10	1036	1498	0	499	499
33	1	Office (G110)	Recessed Parabolic	S	CFL	14	1	13	Sw	8	241	0	182	351	C	Recessed Parabolic	CFL	S	OS	14	1	13	6	241	0	182	263	0	88	88
34	1	Lobby	Recessed Parabolic	E	4'T8 U-Shaped	16	2	32	Sw	8	241	10	1,184	2,283	N/A	Recessed Parabolic	4'T8 U-Shaped	E	Sw	16	2	32	8	241	10	1184	2283	0	0	0
35	1	Lobby	Recessed	S	CFL	22	2	13	Sw	8	241	0	572	1,103	N/A	Recessed	CFL	S	Sw	22	2	13	8	241	0	572	1103	0	0	0
36	1	Lobby	Wall Mounted	E	4'T8	70	1	32	Sw	24	241	5	2,590	14,981	N/A	Wall Mounted	4'T8	E	Sw	70	1	32	24	241	5	2590	14981	0	0	0
37	1	Office Area (G114)	Recessed Parabolic	E	4'T8	17	4	32	Sw	8	241	20	2,516	4,851	N/A	Recessed Parabolic	4'T8	E	Sw	17	4	32	8	241	20	2516	4851	0	0	0
38	1	Office (G114)	Recessed Parabolic	E	4'T8	30	4	32	Sw	8	241	20	4,440	8,560	C	Recessed Parabolic	4'T8	E	OS	30	4	32	6	241	20	4440	6420	0	2140	2140
39	1	Classroom (G115)	Recessed Parabolic	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	C	Recessed Parabolic	4'T8	E	OS	15	4	32	6	241	20	2220	3210	0	1070	1070
40	1	Cafeteria	Recessed Parabolic	E	4'T8	68	4	32	Sw	8	241	20	10,064	19,403	N/A	Recessed Parabolic	4'T8	E	Sw	68	4	32	8	241	20	10064	19403	0	0	0
41	1	Kitchen	Recessed Parabolic	E	4'T8	50	4	32	Sw	8	241	20	7,400	14,267	N/A	Recessed Parabolic	4'T8	E	Sw	50	4	32	8	241	20	7400	14267	0	0	0
42	1	Storage Closet	Recessed Parabolic	E	4'T8	3	4	32	Sw	2	241	20	444	214	N/A	Recessed Parabolic	4'T8	E	Sw	3	4	32	2	241	20	444	214	0	0	0
43	1	Bathroom Men	Parabolic Ceiling Mounted	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Parabolic Ceiling Mounted	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
44	1	Bathroom Women	Parabolic Ceiling Mounted	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Parabolic Ceiling Mounted	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
45	1	Staircase	Parabolic Ceiling Mounted	E	4'T8 U-Shaped	8	2	32	Sw	16	241	10	592	2,283	T8-BL	Parabolic Ceiling Mounted	4'T8 U-Shaped	E	BL	8	2	32	10	241	10	592	1320	0	962	962
46	2	Hallway	Recessed Parabolic	E	4'T8	38	4	32	Sw	16	241	20	5,624	21,686	N/A	Recessed Parabolic	4'T8	E	Sw	38	4	32	16	241	20	5624	21686	0	0	0
47	2	Classroom (G201)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	C	Recessed Parabolic	4'T8	E	OS	12	4	32	6	241	20	1776	2568	0	856	856
48	2	Classroom (G202)	Recessed Parabolic	E	4'T8	22	4	32	Sw	8	241	20	3,256	6,278	C	Recessed Parabolic	4'T8	E	OS	22	4	32	6	241	20	3256	4708	0	1569	1569
49	2	Classroom (G202)	Recessed Parabolic	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	N/A	Recessed Parabolic	4'T8 U-Shaped	E	Sw	2	2	32	8	241	10	148	285	0	0	0
50	2	Classroom (G204)	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
51	2	Classroom (G205)	Recessed Parabolic	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	C	Recessed Parabolic	4'T8	E	OS	15	4	32	6	241	20	2220	3210	0	1070	1070
52	2	Classroom (G206)	Recessed Parabolic	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed Parabolic	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
53	2	Classroom (G207)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
54	2	Classroom (G208)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
55	2	Classroom (G212)	Recessed Parabolic	E	4'T8	23	4	32	Sw	8	241	20	3,404	6,563	C	Recessed Parabolic	4'T8	E	OS	23	4	32	6	241	20	3404	4922	0	1641	1641
56	2	Office (G210)	Recessed Parabolic	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed Parabolic	4'T8	E	OS	3	4	32	6	241	20	444	642	0	214	214
57	2	Bathroom Men	Parabolic Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Parabolic Ceiling Mounted	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
58	2	Bathroom Women	Parabolic Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Parabolic Ceiling Mounted	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
59	2	Bathroom Men	Parabolic Ceiling Mounted	E	4'T8	4	1	32	Sw	8	241	5	148	285	C	Parabolic Ceiling Mounted	4'T8	E	OS	4	1	32	6	241	5	148	214	0	71	71
60	2	Bathroom Women	Parabolic Ceiling Mounted	E	4'T8	4	1	32	Sw	8	241	5	148	285	C	Parabolic Ceiling Mounted	4'T8	E	OS	4	1	32	6	241	5	148	214	0	71	71
61	2	Classroom (G216)	Recessed Parabolic	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Recessed Parabolic	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
62	2	Classroom (G216)	Recessed Parabolic	E	4'T8	18	2	32	Sw	8	241	10	1,332	2,568	C	Recessed Parabolic	4'T8	E	OS	18	2	32	6	241	10	1332	1926	0	642	642
63	2	Storage Closet (G221)	Recessed Parabolic	E	4'T8	10	2	32	Sw	2	241	10	740	357	N/A	Recessed Parabolic	4'T8	E	Sw	10	2	32	2	241	10	740	357	0	0	0
64	2	Storage Closet (G219)	Recessed Parabolic	E	4'T8	6	4	32	Sw	2	241	20	888	428	N/A	Recessed Parabolic	4'T8	E	Sw	6	4	32	2	241	20	888	428	0	0	0
65	2	Storage Closet (G217)	Recessed Parabolic	E	4'T8	12	2	32	Sw	2	241	10	888	428	N/A	Recessed Parabolic	4'T8	E	Sw	12	2	32	2	241	10	888	428	0	0	0
66	2	Office (G223)	Recessed Parabolic	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	C	Recessed Parabolic	4'T8	E	OS	6	4	32	6	241	20	888	1284	0	428	428
67	2	Classroom (G218)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
68	2	Classroom (G225)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
69	2	Classroom (G229)	Recessed Parabolic	E	4'T8	19	4	32	Sw	8	241	20	2,812	5,422	C	Recessed Parabolic	4'T8	E	OS	19	4	32	6	241	20	2812	4066	0	1355	1355
70	2	Storage Closet (G220)	Recessed Parabolic	E	4'T8	8	4	32	Sw	2	241	20	1,184	571	N/A	Recessed Parabolic	4'T8	E	Sw	8	4	32	2	241	20	1184	571	0	0	0
71	2	Classroom (G222)	Recessed Parabolic	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	C	Recessed Parabolic	4'T8	E	OS	15	4	32	6	241	20	2220	3210	0	1070	1070
72	2	Classroom (G224)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
73	2	Classroom (G231)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
74	2	Classroom (G235)	Recessed Parabolic	E	4'T8	18	4	32	Sw	8	241	20	2,664	5,136	C	Recessed Parabolic	4'T8	E	OS	18	4	32	6	241	20	2664	3852	0	1284	1284
75	2	Office (G226)	Recessed Parabolic	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed Parabolic	4'T8	E	OS	3	4	32	6	241	20	444	642	0	214	214
76	1	Exterior	Wallpack	E	HPS	6	1	250	T	12	241	50	1,800	5,206	LED	Wallpack	LED	E	T	6	1	78	12	241	0	468	1353	3852	0	3852
77	1	Exterior	Wallpack	E	HPS	2	1	250	PC	12	241	50	600	1,735	LED	Wallpack	LED	E	PC	2	1	78	12	241	0	156	451	1284	0	1284
78	1	Hallway	Exit Sign	S	LED	30	1	25	N	24	365	3	825	7,227	LEDex	Exit Sign	LED	S	N	30	1	5	24	365	0	150	1314	5913	0	5913
Totals:						**1,351**	**229**	**4,029**				**1,440**	**186,687**	**472,509**						**1,351**	**229**	**3,545**			**1,320**	**178,515**	**413,875**	**17,468**	**41,166**	**58,634**

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

CEG Project #: 9C12049
Facility Name: Bunker Hill Middle School
Address: 372 Pitman - Downer Road
City, State, Zip Sewell, NJ 08080

EXISTING FIXTURES									PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS						LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
1	Gymnasium	3230	18" Hi-Bay, 1 Lamp, 250W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	295	30	8.85	28,586	Replace Fixture	2x4 54w T5HO 4 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI454UNV	4	236	30	7.08	22,868	1.77	5,717	$789	0	No New Controls	0	0.0%	0	$0	$8,100.00	$5,100.00	$13,200.00	$1,500.00	14.83	$0.00	$0.00	$0.00	FALSE	-
2	Gymnasium Exits	8760	LED Exit	1	4	4	0.02	140	Existing to Remain	0	1	4	0	0.02	140	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	Adaptive Gymnasium	3230	18" Hi-Bay, 1 Lamp, 250W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	295	12	3.54	11,434	Replace Fixture	2x4 54w T5HO 4 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI454UNV	4	236	12	2.83	9,147	0.71	2,287	$316	0	No New Controls	0	0.0%	0	$0	$3,240.00	$2,040.00	$5,280.00	$600.00	14.83	$0.00	$0.00	$0.00	FALSE	-
2	Adaptive Gymnasium Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	Boys Locker Room	3230	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	6	0.44	1,415	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	6	0.28	911	0.16	504	$70	0	No New Controls	0	0.0%	0	$0	$840.00	$960.00	$1,800.00	$0.00	25.89	$0.00	$0.00	$0.00	FALSE	-
4	Boys Locker Room	3230	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	5	0.55	1,760	Existing to Remain	0	4	109	0	0.55	1,760	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Boys Locker Room Exits	8760	LED Exit	1	4	4	0.02	140	Existing to Remain	0	1	4	0	0.02	140	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Boys Locker Room Passage to Gym	3230	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	352	Existing to Remain	0	4	109	0	0.11	352	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Boys Locker Room Lav.	3230	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	704	Existing to Remain	0	4	109	0	0.22	704	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Boys Locker Room Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
5	Boys Locker Room Storage	500	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	55	Existing to Remain	0	4	109	0	0.11	55	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	11	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	132.96
5	Gymnasium Storage	500	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	7	0.76	382	Existing to Remain	0	4	109	0	0.76	382	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	76	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	33.24
5	Exterior Storage	500	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	55	Existing to Remain	0	4	109	0	0.11	55	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	11	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	132.96
3	Girls Locker Room	3230	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	6	0.44	1,415	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	6	0.28	911	0.16	504	$70	0	No New Controls	0	0.0%	0	$0	$840.00	$960.00	$1,800.00	$0.00	25.89	$0.00	$0.00	$0.00	FALSE	-
4	Girls Locker Room	3230	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	5	0.55	1,760	Existing to Remain	0	4	109	0	0.55	1,760	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Girls Locker Room Exits	8760	LED Exit	1	4	4	0.02	140	Existing to Remain	0	1	4	0	0.02	140	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Girls Locker Room Passage to Gym	3230	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	352	Existing to Remain	0	4	109	0	0.11	352	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Girls Locker Room Lav.	3230	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	704	Existing to Remain	0	4	109	0	0.22	704	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Girls Locker Room Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
5	Girls Locker Room Storage	500	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	55	Existing to Remain	0	4	109	0	0.11	55	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	11	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	132.96
5	Electrical Room	800	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
4	Corridor by Gymnasium	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	13	1.42	4,712	Existing to Remain	0	4	109	0	1.42	4,712	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor by Gymnasium Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	Mechanical/Receiving	1900	6"x4', 2 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	2	58	2	0.12	220	Existing to Remain	0	2	58	0	0.12	220	0.00	0	$0	4	Dual Technology Occupancy Sensor -	2	20.0%	44	$6	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	FALSE	115.07

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
5	Room	1900	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	4	0.44	828	Existing to Remain	0	4	109	0	0.44	828	0.00	0	$0		Occupancy Sensor - Remote Mnt.		0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Mechanical/Receiving Room Exit	1900	LED Exit	1	4	1	0.00	8	Existing to Remain	0	1	4	0	0.00	8	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
5	Mechanical Room	800	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	11	1.20	959	Existing to Remain	0	4	109	0	1.20	959	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	Mechanical Room	800	6"x4', 2 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	2	58	2	0.12	93	Existing to Remain	0	2	58	0	0.12	93	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	19	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	136.65
2	Mechanical Room Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
5	Fire Pump Room	800	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
4	Mechanical Room Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	621	Existing to Remain	0	4	109	0	0.33	621	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	124	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	18.37
4	Tech Classroom (B-2)	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.53
5	Wood Shop	1710	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	36	3.92	6,710	Existing to Remain	0	4	109	0	3.92	6,710	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Wood Shop Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
5	Woodshop Finishing Room	1710	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	186	Existing to Remain	0	4	109	0	0.11	186	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
13	Woodshop CPU Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	75	$10	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	30.62
4	Woodshop Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
4	Vocal Classroom	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	15	1.64	2,796	Existing to Remain	0	4	109	0	1.64	2,796	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	559	$77	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	$35.00	8.62
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Vocal Classroom Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
4	Vocal Classroom Practice Room	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
2	Vocal Classroom Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (Mech Rm - Vocal Room)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	3,987	Existing to Remain	0	4	109	0	1.20	3,987	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (Mech Rm - Vocal Room) Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Drama Classroom (B-8)	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	16	1.74	2,982	Existing to Remain	0	4	109	0	1.74	2,982	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	596	$82	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	$35.00	8.08
2	Drama Classroom (B-8) Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Drama Classroom (B-8) Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
5	Stage Prep Area	3325	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	1	0.11	362	Existing to Remain	0	4	109	0	0.11	362	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
5	Stage	3325	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	6	0.65	2,175	Existing to Remain	0	4	109	0	0.65	2,175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
2	Stage Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Stage Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	164	Existing to Remain	0	4	109	0	0.33	164	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	77.56
3	Stage Stair	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Stage Lift Room	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	31	$4	$140.00	$160.00	$300.00	$0.00	25.15	$300.00	$50.00	$350.00	FALSE	81.15
3	Cafetorium	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	11	0.80	2,670	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	11	0.52	1,719	0.29	951	$131	0	No New Controls	0	0.0%	0	$0	$1,540.00	$1,760.00	$3,300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Cafetorium	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	42	4.58	15,222	Existing to Remain	0	4	109	0	4.58	15,222	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Cafetorium Exits	8760	LED Exit	1	4	3	0.01	105	Existing to Remain	0	1	4	0	0.01	105	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Faculty Dining	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	8	0.87	1,491	Existing to Remain	0	4	109	0	0.87	1,491	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	298	$41	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	7.65
4	Custodial Room	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	174	Existing to Remain	0	4	109	0	0.22	174	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	35	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	37.40
4	Kitchen	1520	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	19	2.07	3,148	Existing to Remain	0	4	109	0	2.07	3,148	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	Kitchen	1520	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	2	0.15	222	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	2	0.09	143	0.05	79	$11	0	No New Controls	0	0.0%	0	$0	$280.00	$320.00	$600.00	$0.00	55.01	$0.00	$0.00	$0.00	FALSE	-
2	Kitchen Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Kitchen Office	1520	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	166	Existing to Remain	0	4	109	0	0.11	166	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	43.74
4	Kitchen Storage	1520	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	4	0.44	663	Existing to Remain	0	4	109	0	0.44	663	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	133	$18	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	17.22
4	Kitchen Lockers	1520	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	166	Existing to Remain	0	4	109	0	0.11	166	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	76.54
3	Kitchen Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
4	Corridor (Drama Rm - Kitchen)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	4,349	Existing to Remain	0	4	109	0	1.31	4,349	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (Drama Rm - Kitchen) Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	SGI Room (B-11)	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41
13	Computer Room (B-9)	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.53
4	Boys Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Boys Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Mens Lav.	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
4	Womens Lav.	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
4	Girls Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
3	Girls Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
13	Computer Room (B-7)	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.53
4	SGI Room (B-5)	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41
4	IMC	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	55	6.00	11,391	Existing to Remain	0	4	109	0	6.00	11,391	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	IMC Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	IMC Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	207	Existing to Remain	0	4	109	0	0.11	207	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	41	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	34.99
4	IMC Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	109	Existing to Remain	0	4	109	0	0.22	109	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	22	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	66.48
3	IMC Storage	500	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	37	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	24	0.03	13	$2	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	167.22	$0.00	$0.00	$0.00	FALSE	-
4	Special Educ. Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$10	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	17.49
6	Elevator Machine Room	800	6"x4', 2 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	156.17
4	Corridor (B-11 to Elev Mach Room)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	2,175	Existing to Remain	0	4	109	0	0.65	2,175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (B-11 to Elev Mach Room) Exits	8760	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	5,729	Existing to Remain	0	4	109	0	0.65	5,729	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	Corridor (B-5 to IMC)	3325	6"x4', 2 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	2	58	1	0.06	193	Existing to Remain	0	2	58	0	0.06	193	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (B-5 to IMC) Exits	8760	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	955	Existing to Remain	0	4	109	0	0.11	955	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (IMC to Elev. Mach Room)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	8	0.87	2,899	Existing to Remain	0	4	109	0	0.87	2,899	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	Corridor (IMC to Elev. Mach Room)	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	2	0.15	485	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	2	0.09	313	0.05	173	$24	0	No New Controls	0	0.0%	0	$0	$280.00	$320.00	$600.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
5	Corridor (IMC to Elev. Mach Room)	3325	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	14	1.53	5,074	Existing to Remain	0	4	109	0	1.53	5,074	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	Corridor (IMC to Elev. Mach Room)	3325	8" Dwnlt., 2 Lamp Quad CFL, 26w, No Lens	2	56	4	0.22	745	Existing to Remain	0	2	56	0	0.22	745	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	Corridor (IMC to Elev. Mach Room) Exits	8760	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	3	0.22	1,918	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	3	0.14	1,235	0.08	683	$94	0	No New Controls	0	0.0%	0	$0	$420.00	$480.00	$900.00	$0.00	9.54	$0.00	$0.00	$0.00	FALSE	-
7	Courtyard	4380	100W HPS, Wall Pack	1	128	6	0.77	3,364	Replace Fixture	60W LED Wall Pack	1	60	6	0.36	1,577	0.41	1,787	$247	0	No New Controls	0	0.0%	0	$0	$1,410.00	$1,020.00	$2,430.00	$0.00	9.85	$0.00	$0.00	$0.00	FALSE	-
7	Courtyard	4380	100W HPS, Wall Pack	1	128	6	0.77	3,364	Replace Fixture	60W LED Wall Pack	1	60	6	0.36	1,577	0.41	1,787	$247	0	No New Controls	0	0.0%	0	$0	$1,410.00	$1,020.00	$2,430.00	$0.00	9.85	$0.00	$0.00	$0.00	FALSE	-
4	Instrumental Music Classroom	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	20	2.18	3,728	Existing to Remain	0	4	109	0	2.18	3,728	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	746	$103	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	9.38
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
2	Instrumental Music Classroom Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Instrumental Music Classroom Office	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$10	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	17.49

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
4	Instrumental Music Classroom Practice Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41
4	Instrumental Music Classroom Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	109	Existing to Remain	0	4	109	0	0.22	109	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	22	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	66.48
4	Custodial Storage	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
4	Corridor (Inst. Mus. To Cust. Stor.)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	2,175	Existing to Remain	0	4	109	0	0.65	2,175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (Inst. Mus. To Cust. Stor.) Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (A-24 to A-14)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	13	1.42	4,712	Existing to Remain	0	4	109	0	1.42	4,712	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (A-24 to A-14) Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-24	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-22	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-20	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-18	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-16	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-14	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-11	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-9	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	A-9/A-7 Prep Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41
4	Classroom A-7	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
3	Classroom 147	1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25	[illegible]	Sensor w/2 Pole Powerpack - Remote Mnt.	[illegible]	0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Boys Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Boys Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Mens Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
3	Boys Lav. Entrance	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Custodial Room	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
3	Womens Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
3	Girls Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	3	0.22	728	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	3	0.14	469	0.08	259	$36	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	94	$13	$420.00	$480.00	$900.00	$0.00	25.15	$300.00	$50.00	$350.00	FALSE	27.05
3	Girls Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Girls Lav. Entrance	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Teachers Work Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	4	0.44	746	Existing to Remain	0	4	109	0	0.44	746	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	149	$21	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	15.31
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (By Teachers Work Room)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (By Teachers Work Room) Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Copy Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	4	0.44	746	Existing to Remain	0	4	109	0	0.44	746	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	149	$21	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	15.31
3	Nurse Waiting Area	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	2	0.15	277	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	2	0.09	179	0.05	99	$14	0	No New Controls	0	0.0%	0	$0	$280.00	$320.00	$600.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
4	Nurse Room	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	5	0.55	1,036	Existing to Remain	0	4	109	0	0.55	1,036	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	Nurse Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	104.52	$0.00	$0.00	$0.00	FALSE	-
4	Nurse Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	27.55
3	Guidance Waiting Area	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	7	0.51	971	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	7	0.33	625	0.18	346	$48	0	No New Controls	0	0.0%	0	$0	$980.00	$1,120.00	$2,100.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
4	Guidance File Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	55	Existing to Remain	0	4	109	0	0.11	55	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Guidance Office 1	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
4	Guidance Office 2	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
4	Guidance Office 3	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
3	Guidance Conference Room	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	6	0.44	832	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	6	0.28	536	0.16	296	$41	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	107	$15	$840.00	$960.00	$1,800.00	$0.00	44.01	$300.00	$50.00	$350.00	$35.00	21.30

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
9	Main Lobby	3325	5 Lamp, T8, 32w, Elect. Ballast, Wall Mount, Direct/Indirect	5	140	12	1.68	5,586	Existing to Remain	0	5	140	0	1.68	5,586	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
10	Main Lobby	3325	10" Dwnlt, 1 Lamp HPS, 50w, Clear Lens	1	125	4	0.50	1,663	Existing to Remain	68 Watt, LED Retrofit Unit	1	125	0	0.50	1,663	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$1,060.00	$680.00	$1,740.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
11	Main Lobby	3325	Wall Sconce	1	60	2	0.12	399	Existing to Remain	0	1	60	0	0.12	399	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
5	Main Lobby	3325	6"x8', 4 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	4	109	12	1.31	4,349	Existing to Remain	0	4	109	0	1.31	4,349	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	Main Lobby	3325	6"x4', 2 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Strip	2	58	9	0.52	1,736	Existing to Remain	0	2	58	0	0.52	1,736	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	Main Lobby	3325	8" Dwnlt., 2 Lamp Quad CFL, 26w, No Lens	2	56	8	0.45	1,490	Existing to Remain	0	2	56	0	0.45	1,490	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	Attendance Waiting Area	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	555	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	357	0.10	198	$27	0	No New Controls	0	0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
4	Attendance Office	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	27.55
4	Vice Principal Office 1	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	27.55
4	Vice Principal Office 2	1900	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	83	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	27.55
3	Main Office Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
15	Main Office	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	2	73	5	0.37	694	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	5	0.24	447	0.13	247	$34	0	No New Controls	0	0.0%	0	$0	$700.00	$800.00	$1,500.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
3	Main Office	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	3	0.22	416	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	3	0.14	268	0.08	148	$20	0	No New Controls	0	0.0%	0	$0	$420.00	$480.00	$900.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
3	Main Office	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	12	0.88	1,664	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	12	0.56	1,072	0.31	593	$82	0	No New Controls	0	0.0%	0	$0	$1,680.00	$1,920.00	$3,600.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
3	Principal Office	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	555	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	357	0.10	198	$27	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	71	$10	$560.00	$640.00	$1,200.00	$0.00	44.01	$300.00	$50.00	$350.00	$35.00	31.95
16	Conference Room	1900	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	2	73	6	0.44	832	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., 9 Cell Parabolic Lens	3	47	6	0.28	536	0.16	296	$41	0	No New Controls	0	0.0%	0	$0	$840.00	$960.00	$1,800.00	$0.00	44.01	$0.00	$0.00	$0.00	FALSE	-
12		1900	7" Dwnlt., 2 Lamp Twin Tube CFL, 13w, No Lens	2	30	14	0.42	798	Existing to Remain	0	2	30	0	0.42	798	0.00	0	$0				0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (By Vice Principal)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (By Vice Principal) Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-12	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-10	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-8	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
4	Classroom A-6	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-4	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-2	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-1	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom A-3	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Book Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	164	Existing to Remain	0	4	109	0	0.33	164	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	77.56
4	Classroom A-5	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	20	2.18	3,728	Existing to Remain	0	4	109	0	2.18	3,728	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	746	$103	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	9.38
4	Classroom A-5 Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	109	Existing to Remain	0	4	109	0	0.22	109	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	22	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	66.48
4	Girls Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Girls Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Girls Lav. Entrance	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Boys Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Boys Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Boys Lav. Entrance	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Womens Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
3	Mens Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
4	Custodial Closet	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	174	Existing to Remain	0	4	109	0	0.22	174	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	35	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	37.40
4	Corridor (A-2 to A-12)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	14	1.53	5,074	Existing to Remain	0	4	109	0	1.53	5,074	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (A-2 to A-12) Exits	8760	LED Exit	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	A/V Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	109	Existing to Remain	0	4	109	0	0.22	109	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	22	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	66.48

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
4	Science Classroom B-1	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
4	Science Classroom B-1 Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	55	Existing to Remain	0	4	109	0	0.11	55	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	11	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	132.96
4	Science Classroom B-3	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
4	Corridor (A/V Stor. To B-3)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	2,175	Existing to Remain	0	4	109	0	0.65	2,175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (A/V Stor. To B-3) Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Stairwell 1	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	3,624	Existing to Remain	0	4	109	0	1.09	3,624	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Stairwell 1 Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-1A	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	1,118	Existing to Remain	0	4	109	0	0.65	1,118	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	224	$31	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	10.21
4	Classroom C-2	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-4	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-6	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-8	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-10	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-12	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-1	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-3	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-3/5 Prep Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
4	Classroom C-5	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Girls Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Girls Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
3	Womens Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
4	Boys Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Boys Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Custodial Closet	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
4	Corridor (C-1A to Boys Lav.)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	13	1.42	4,712	Existing to Remain	0	4	109	0	1.42	4,712	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (C-1A to Boys Lav.) Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-7	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-9	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-9/13 Prep Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	186	Existing to Remain	0	4	109	0	0.11	186	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	37	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	68.04
4	Classroom C-13	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	C-11	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	186	Existing to Remain	0	4	109	0	0.11	186	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	37	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	38.88
4	Teachers Work Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41
4	C-15	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	9	0.98	1,678	Existing to Remain	0	4	109	0	0.98	1,678	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	336	$46	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	10.04
4	Classroom C-14	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-16	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	16	1.74	2,982	Existing to Remain	0	4	109	0	1.74	2,982	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	596	$82	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.72
14	Center Stairwell	3325	5 Lamp, T8, 32w, Elect. Ballast, Pendant Mount, Direct/Indirect	5	140	6	0.84	2,793	Existing to Remain	0	5	140	0	0.84	2,793	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Teachers Work Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
4	Classroom C-18	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-20	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-22	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Girls Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Girls Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Womens Lav.	800	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	83.10
3	Mens Lav.	800	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	58	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	38	0.03	21	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	8	$1	$140.00	$160.00	$300.00	$0.00	104.52	$150.00	$50.00	$200.00	FALSE	192.72
4	Boys Lav.	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	1,087	Existing to Remain	0	4	109	0	0.33	1,087	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	217	$30	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	11.66
3	Boys Lav.	3325	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	243	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	156	0.03	86	$12	0	No New Controls	0	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	25.15	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (C-7 to Boys Lav.)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	15	1.64	5,436	Existing to Remain	0	4	109	0	1.64	5,436	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-17	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-17/19 Prep Room	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.41
4	Classroom C-19	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	447	$62	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	15.63
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	4	0.29	499	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	321	0.10	178	$25				0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-24	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-26	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-28	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-30	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
3	Classroom C-30	1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-32	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$57	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.22
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-21	1710	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	19	2.07	3,541	Existing to Remain	0	4	109	0	2.07	3,541	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	708	$98	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	9.87
3		1710	2x2, 2 Lamp, T8 32w U Lamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	73	1	0.07	125	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	1	0.05	80	0.03	44	$6				0.0%	0	$0	$140.00	$160.00	$300.00	$0.00	48.90	$0.00	$0.00	$0.00	FALSE	-
4	Classroom C-21 Storage	500	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	109	Existing to Remain	0	4	109	0	0.22	109	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	22	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	66.48
4	Stairwell 2	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	3,624	Existing to Remain	0	4	109	0	1.09	3,624	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Stairwell 2 Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
4	Corridor (C-17 to Stair 2)	3325	2x4, 4 Lamp, T8 32w , Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	12	1.31	4,349	Existing to Remain	0	4	109	0	1.31	4,349	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	Corridor (C-17 to Stair 2) Exit	8760	LED Exit	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
17	Exterior	4380	250w HPS, Pole Mounted Single Head Shoebox	1	285	32	9.12	39,946	Retrofit	68 Watt, LED Retrofit Unit	1	68	32	2.18	9,531	6.94	30,415	$4,197	0	No New Controls	0	0.0%	0	$0	$8,480.00	$5,440.00	$13,920.00	$0.00	3.32	$0.00	$0.00	$0.00	FALSE	-
18	Exterior	4380	250w HPS, Pole Mounted Dual Head Shoebox	2	580	3	1.74	7,621	Retrofit	68 Watt, LED Retrofit Unit	2	136	3	0.41	1,787	1.33	5,834	$805	0	No New Controls	0	0.0%	0	$0	$1,590.00	$1,020.00	$2,610.00	$0.00	3.24	$0.00	$0.00	$0.00	FALSE	-
19	Exterior	4380	250w HPS, Pole Mounted Single Flood Light	2	580	5	2.90	12,702	Replace Fixture	68 Watt, 16" LED Flood Light Fixture	1	68	5	0.34	1,489	2.56	11,213	$1,547	0	No New Controls	0	0.0%	0	$0	$1,225.00	$850.00	$2,075.00	$500.00	1.02	$0.00	$0.00	$0.00	FALSE	-
20	Exterior - Main Entrance	4380	100w HPS, Recessed 10"	1	128	2	0.26	1,121	Retrofit	68 Watt, LED Retrofit Unit	1	68	2	0.14	596	0.12	526	$73	0	No New Controls	0	0.0%	0	$0	$530.00	$340.00	$870.00	$0.00	11.99	$0.00	$0.00	$0.00	FALSE	-
7	Exterior	4380	100W HPS, Wall Pack	1	128	19	2.43	10,652	Replace Fixture	60W LED Wall Pack	1	60	19	1.14	4,993	1.29	5,659	$781	0	No New Controls	0	0.0%	0	$0	$4,465.00	$3,230.00	$7,695.00	$0.00	9.85	$0.00	$0.00	$0.00	FALSE	-
21	Exterior	4380	100w HPS, Recessed 12" Square	1	128	1	0.13	561	Retrofit	69 Watt, LED Retrofit Unit	1	68	1	0.07	298	0.06	263	$36	0	No New Controls	0	0.0%	0	$0	$265.00	$170.00	$435.00	$0.00	11.99	$0.00	$0.00	$0.00	FALSE	-
	TOTAL					**1,573**	**176**	**431,443**					**295**	**155**	**355,642**	**20**	**75,801**	**10,461**			**149**	**26**	**29,492**	**4,070**	**$56,835**	**$49,550**	**$106,385**	**$2,600**	**9.92**	**$48,150**	**$7,450**	**$55,600**	**$2,795.00**	**12.97**

CEG Project #: 9C12049
Facility Name: Chestnut Ridge Middle School
Address: 641 Hurfville-Cross Keys Road
City, State, Zip Sewell, NJ 08080

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
1	2. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
2	2. Classroom 220	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 221	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 219	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
3	2. Faculty Planning	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	8	0.66	1,122	Existing to Remain	0	3	82	0	0.66	1,122	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	224	$32	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	9.75
2	2. Classroom 218	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	2,796	Existing to Remain	0	4	109	0	1.64	2,796	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	559	$81	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.98
2	218/217 Prep Room	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.56
2	2. Classroom 217	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	2,796	Existing to Remain	0	4	109	0	1.64	2,796	0.00	0	$0	7	Remove Existing Wall Occupancy Switches, Replace with new SPST switches. Provide Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	559	$81	$0.00	$0.00	$0.00	$0.00	-	$950.00	$200.00	$1,150.00	FALSE	14.28
2	2. Classroom 222	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 223	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 224	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom CPU 225	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	11	1.20	2,050	Existing to Remain	0	4	109	0	1.20	2,050	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	410	$59	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.87
2	225/227 Shared Room	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	75	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	29.34
2	2. Classroom 227	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
1	2. Boys' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
1	2. Girls' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
4	2. Men's Faculty RR	800	1 Lamp, Incandescent 60w, Surface Mnt., No Lens	1	60	1	0.06	48	Relamp/Reballast	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	26.81	$150.00	$50.00	$200.00	FALSE	333.87
4	2. Women's Faculty RR	800	1 Lamp, Incandescent 60w, Surface Mnt., No Lens	1	60	1	0.06	48	Relamp/Reballast	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	26.81	$150.00	$50.00	$200.00	FALSE	333.87
5	2. Custodial Room	800	1 Lamp, Compact Flourescent Light, 26w	1	28	1	0.03	22	Existing to Remain	0	1	28	0	0.03	22	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	310.02
2	2. Classroom 216	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.56
1	2. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
3	2. Classroom 215	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	12	0.98	1,683	Existing to Remain	0	3	82	0	0.98	1,683	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	337	$48	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	9.60
1		1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	99	Existing to Remain	0	2	58	0	0.06	99	0.00	0	$0				0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
2	2. Classroom 214	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	13	1.42	2,423	Existing to Remain	0	4	109	0	1.42	2,423	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	485	$70	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.66
6	2. Classroom 214 Storage	1710	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	35.01
2	2. Mechanical Room	800	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	174	Existing to Remain	0	4	109	0	0.22	174	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	35	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	62.72
2	2. Classroom 201	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 213	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 202	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 212	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 203	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
1	2. Boys' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
1	2. Girls' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
4	2. Men's Faculty RR	800	1 Lamp, Incandescent 60w, Surface Mnt., No Lens	1	60	1	0.06	48	Relamp/Reballast	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	26.81	$150.00	$50.00	$200.00	FALSE	333.87
4	2. Women's Faculty RR	800	1 Lamp, Incandescent 60w, Surface Mnt., No Lens	1	60	1	0.06	48	Relamp/Reballast	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	26.81	$150.00	$50.00	$200.00	FALSE	333.87
5	2. Custodial Room	800	1 Lamp, Compact Flourescent Light, 26w	1	28	1	0.03	22	Existing to Remain	0	1	28	0	0.03	22	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	310.02
2	2. Classroom 211	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	2,796	Existing to Remain	0	4	109	0	1.64	2,796	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	559	$81	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.98
2	2. Classroom 204	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 205	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 206	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 210	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	2,796	Existing to Remain	0	4	109	0	1.64	2,796	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	559	$81	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.98
2	211/210 Prep Room	500	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	164	Existing to Remain	0	4	109	0	0.33	164	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	74.33
3	2. Faculty Planning	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	5	0.41	701	Existing to Remain	0	3	82	0	0.41	701	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	140	$20	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	15.60
2	2. Classroom 209	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 207	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	2. Classroom 208	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
1	2. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
7	Stairwell C	3300	1.5x4, 2 lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	7	0.41	1,340	Existing to Remain	0	2	58	0	0.41	1,340	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
8	Stairwell C	8760	LED Exit Lamp	1	2	2	0.00	35	Existing to Remain	0	1	2	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
9	1. Classroom 114	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 113	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
10	1. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	79.82
9	1. Classroom 112	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
10	1. Books/Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	139.69
9	1. Faculty Planning	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	3	0.33	559	Existing to Remain	0	4	109	0	0.33	559	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.56
9	1. Classroom 115	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	10	1.09	1,864	Existing to Remain	0	4	109	0	1.09	1,864	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	373	$54	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.66
11	1. Classroom 115 Lavatory	800	1 Lamp, Incandescent 75w, Surface Mnt., No Lens	1	75	1	0.08	60	Replace Fixture	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.05	39	$6	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	18.60	$150.00	$50.00	$200.00	FALSE	333.87
9	1. Classroom 116	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 111	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 110	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 117	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
2	1. Classroom 118	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	2,796	Existing to Remain	0	4	109	0	1.64	2,796	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	559	$81	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.98
1	1. Girls' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
12	1. Women's Lavatory	800	6"x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Opaque	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
13	1. Men's Lavatory	800	2x2, 2 U-Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	73	1	0.07	58	Replace Fixture	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.05	38	$5	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	19.39	$150.00	$50.00	$200.00	FALSE	333.87
14	1. Custodian Room	800	1 Lamp, Compact Flourescent Light, 26w, Surface Mnt.	1	28	1	0.03	22	Existing to Remain	0	1	28	0	0.03	22	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	310.02
1	1. Boys' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
13	1. Men's Lavatory	800	2x2, 2 U-Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	73	1	0.07	58	Replace Fixture	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.05	38	$5	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	19.39	$150.00	$50.00	$200.00	FALSE	333.87
15	1. Custodian Room	800	1 Lamp, Compact Flourescent Light, 13w, Mini-Twister, No Globe	1	18	1	0.02	14	Existing to Remain	0	1	18	0	0.02	14	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	482.25
1	1. Girls' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	115	$17	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	21.16
13	1. Women's Lavatory	800	2x2, 2 U-Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	73	1	0.07	58	Replace Fixture	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.05	38	$5	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	19.39	$150.00	$50.00	$200.00	FALSE	333.87
9	1. Classroom 101	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 102	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
9	1. Classroom 109	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 108	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
9	1. Classroom 103	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
1	1. A/V Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	139.69
9	1. Classroom 104	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
1	1. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	139.69
2	1. Classroom 107	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	13	1.42	2,423	Existing to Remain	0	4	109	0	1.42	2,423	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	485	$70	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.66
2	1. Classroom 107 Storage	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	1	0.11	186	Existing to Remain	0	4	109	0	0.11	186	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	37	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	37.26
1	First Floor Main Corridor	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	49	2.84	9,379	Existing to Remain	0	2	58	0	2.84	9,379	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	First Floor Main Corridor	8760	LED Exit Lamp	1	2	10	0.02	175	Existing to Remain	0	1	2	0	0.02	175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
7	Stair "D"	3300	1.5x4, 2 lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	7	0.41	1,340	Existing to Remain	0	2	58	0	0.41	1,340	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
7	Stair "A"	3300	1.5x4, 2 lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	10	0.58	1,914	Existing to Remain	0	2	58	0	0.58	1,914	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
10	1. Nurse Entrance	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	2	0.12	383	Existing to Remain	0	2	58	0	0.12	383	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
10	1. Nurse's Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
10	1. Nurse Area	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	12	0.70	1,190	Existing to Remain	0	2	58	0	0.70	1,190	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
10	1. Nurse Lavatory	800	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
8	1. Nurse Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
10	1. Guidance	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	5	0.29	496	Existing to Remain	0	2	58	0	0.29	496	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
17	1. Guidance	1710	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
10	1. Guidance Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
10	1. Guidance Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
10	1. Guidance Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
1	1. Guidance Conference Room	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	27.57
8	1. Guidance Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	1. Main Office	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	10	0.82	1,402	Existing to Remain	0	3	82	0	0.82	1,402	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
3	1. Principal's Office	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	4	0.33	561	Existing to Remain	0	3	82	0	0.33	561	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.50
18	1. Lavatory	800	1 Lamp, Incandescent 100w, Surface Mnt., No Lens	1	100	1	0.10	80	Replace Fixture	1x2, 2 Lamp, 13w CFL, Surface Mnt., Prismatic Lens	2	26	1	0.03	21	0.07	59	$9	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$35.00	$70.00	$105.00	$0.00	12.32	$150.00	$50.00	$200.00	FALSE	333.87
3	1. Conference Room	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	6	0.49	841	Existing to Remain	0	3	82	0	0.49	841	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	168	$24	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	13.00
1	1. Waiting Area	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	1. Assistant Principal's Office	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	4	0.33	561	Existing to Remain	0	3	82	0	0.33	561	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.50
1	1. Middle Break Room	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	5	0.29	496	Existing to Remain	0	2	58	0	0.29	496	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Atendance Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	60	$9	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	23.34
1	1. Supervisor's Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
6	1. Media Center	1520	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	96	5.57	8,463	Existing to Remain	0	2	58	0	5.57	8,463	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Media Center Exit	8760	LED Exit Lamp	1	2	2	0.00	35	Existing to Remain	0	1	2	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Media Center Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	6	0.35	174	Existing to Remain	0	2	58	0	0.35	174	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	35	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	69.84
2	1. Meida Center Office	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	6	0.65	1,118	Existing to Remain	0	4	109	0	0.65	1,118	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	224	$32	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	9.78
2	1. Classroom 122	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	6	0.65	1,118	Existing to Remain	0	4	109	0	0.65	1,118	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	224	$32	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	9.78
1	1. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	139.69
38	1. Computer Lab	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Parabolic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
38	1. Computer Lab	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Parabolic Lens	4	109	12	1.31	2,237	Existing to Remain	0	4	109	0	1.31	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.22
1	1. Elevator Mechanical Room	800	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
3	1. Speech Room	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	2	0.16	280	Existing to Remain	0	3	82	0	0.16	280	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	56	$8	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	24.76
2	1. 121A Room	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	6	0.65	1,118	Existing to Remain	0	4	109	0	0.65	1,118	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	224	$32	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	9.78
1	1. Girls' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	7	0.41	1,340	Existing to Remain	0	2	58	0	0.41	1,340	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	268	$39	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	9.07
6	1. Women's Lavatory	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
19	1. Custodian Room	800	1 Lamp, Compact Flourescent Light, 26w, No Lens	1	28	1	0.03	22	0	0	0	0	1	0.00	0	0.03	22	$3	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	0	$0	$0.00	$0.00	$0.00	$0.00	0.00	$150.00	$50.00	$200.00	FALSE	-
6	1. Men's Lavatory	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
1	1. Boys' Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	6	0.35	1,148	Existing to Remain	0	2	58	0	0.35	1,148	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	230	$33	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	10.58
2	1. 121B Room	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	10	1.09	1,864	Existing to Remain	0	4	109	0	1.09	1,864	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	373	$54	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.66

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
20	1. 121 Closet	500	1 Lamp, Incandescent 100w, Surface Mnt., Prismatic Lens	1	100	1	0.10	50	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	13	0.07	37	$5	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$10.00	$30.00	$40.00	$7.00	6.19	$150.00	$50.00	$200.00	FALSE	534.19
20	1. 121 Closet	500	1 Lamp, Incandescent 100w, Surface Mnt., Prismatic Lens	1	100	1	0.10	50	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	13	0.07	37	$5	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$10.00	$30.00	$40.00	$7.00	6.19	$150.00	$50.00	$200.00	FALSE	534.19
3	1. 121A Small Conference Room	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	2	0.16	280	Existing to Remain	0	3	82	0	0.16	280	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	56	$8	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	43.33
21	1. ADP Gym	3040	18", 1 Lamp, 250W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	295	8	2.36	7,174	Replace Fixture	2x4 54w T5HO 4 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI454UNV	4	236	8	1.89	5,740	0.47	1,435	$207	0	No New Controls	0	0.0%	0	$0	$2,160.00	$1,360.00	$3,520.00	$400.00	15.10	$0.00	$0.00	$0.00	FALSE	-
8	1. ADP Gym Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Gym Lobby	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	766	Existing to Remain	0	2	58	0	0.23	766	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
21	1. Gym Boys' Half	3040	18", 1 Lamp, 250W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	295	12	3.54	10,762	Replace Fixture	2x4 54w T5HO 4 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI454UNV	4	236	12	2.83	8,609	0.71	2,152	$310	0	No New Controls	0	0.0%	0	$0	$3,240.00	$2,040.00	$5,280.00	$600.00	15.10	$0.00	$0.00	$0.00	FALSE	-
21	1. Gym Girls' Half	3040	18", 1 Lamp, 250W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	295	12	3.54	10,762	Replace Fixture	2x4 54w T5HO 4 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI454UNV	4	236	12	2.83	8,609	0.71	2,152	$310	0	No New Controls	0	0.0%	0	$0	$3,240.00	$2,040.00	$5,280.00	$600.00	15.10	$0.00	$0.00	$0.00	FALSE	-
8	1. Gym Exits	8760	LED Exit Lamp	1	2	4	0.01	70	Existing to Remain	0	1	2	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Boys' Locker Entrance	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Boys' Locker Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	383	Existing to Remain	0	2	58	0	0.12	383	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Boys Locker Room Showers	3300	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Boys' Locker Room Area	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	9	0.52	1,587	Existing to Remain	0	2	58	0	0.52	1,587	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Boys' Locker Room Area	3040	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	1. Boys' Locker Room Office	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	16.77
6	1. Boys' Locker Room Office Lavatory	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
22	1. Boys Locker Room Lavatory Shower	3300	6", 1 Lamp, Incandescent 60w, Recessed Mnt., No Lens	1	60	1	0.06	198	Existing to Remain	0	1	60	0	0.06	198	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Boys' Locker Room Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
6	1. Boys' Locker Room Corridor	3300	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	191	Existing to Remain	0	2	58	0	0.06	191	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	38	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	36.28
8	1. Boys' Locker Room Corridor Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Boys' Locker Room Exit	8760	LED Exit Lamp	1	2	2	0.00	35	Existing to Remain	0	1	2	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Boys' Gym Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	209.53
6	1. Girls' Gym Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	139.69
6	1. Girls' Locker Entrance	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Girls' Locker Lavatory	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	383	Existing to Remain	0	2	58	0	0.12	383	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
6	1. Girls' Locker Room Showers	3300	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	3	0.17	574	Existing to Remain	0	2	58	0	0.17	574	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Girls' Locker Room Area	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	9	0.52	1,587	Existing to Remain	0	2	58	0	0.52	1,587	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Girls' Locker Room Area	3040	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
2	1. Girls' Locker Room Office	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	16.77
6	1. Girls' Locker Room Office Lavatory	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
22	1. Girls' Locker Room Lavatory Shower	3300	6", 1 Lamp, Incandescent 60w, Recessed Mnt., No Lens	1	60	1	0.06	198	Existing to Remain	0	1	60	0	0.06	198	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Girls' Locker Room Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
6	1. Girls' Locker Room Corridor	3300	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	191	Existing to Remain	0	2	58	0	0.06	191	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Girls' Locker Room Corridor Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Girls' Locker Room Exit	8760	LED Exit Lamp	1	2	2	0.00	35	Existing to Remain	0	1	2	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
23	1. Boiler Room	1710	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	12	0.70	1,190	Existing to Remain	0	2	58	0	0.70	1,190	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	238	$34	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	28.15
8	1. Boiler Room Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
23	1. Genset Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	4	0.23	186	Existing to Remain	0	2	58	0	0.23	186	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	37	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	58.93
23	1. Electric Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	2	0.12	93	Existing to Remain	0	2	58	0	0.12	93	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	19	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	130.96
23	1. Pump Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	3	0.17	139	Existing to Remain	0	2	58	0	0.17	139	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	28	$4	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	87.30
23	1. Main Custodian Office	1710	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	12	0.70	1,190	Existing to Remain	0	2	58	0	0.70	1,190	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	238	$34	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	$35.00	19.40
6	1. Custodian Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	FALSE	523.83
3	1. Staff Dining	2300	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	5	0.41	943	Existing to Remain	0	3	82	0	0.41	943	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	189	$27	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	11.60
24	1. Kitchen	1520	1x8, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	4	109	12	1.31	1,988	Existing to Remain	0	4	109	0	1.31	1,988	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
17	1. Kitchen	1520	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic lens	2	58	4	0.23	353	Existing to Remain	0	2	58	0	0.23	353	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
25	1. Kitchen	1520	6", 1 Lamp, Incandescent 60w, Recessed Mnt., Parabolic Lens	1	60	17	1.02	1,550	Existing to Remain	0	1	60	0	1.02	1,550	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Kitchen Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
2	1. Kitchen Office	1520	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	1	0.11	166	Existing to Remain	0	4	109	0	0.11	166	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	41.91
26	1. Kitchen Hood Lights	1520	12"x12", Hood Lights, Incandescent Lamp, 60w	1	60	4	0.24	365	Existing to Remain	0	1	60	0	0.24	365	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
6	1. Kitchen Locker	1520	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic lens	2	58	1	0.06	88	Existing to Remain	0	2	58	0	0.06	88	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	18	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	78.77

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
27	1. Kitchen Locker Lavatory	800	6"x2', 1 Lamp, T12 20w, Magnetic Ballast, Surface Mnt., Opaque	1	22	1	0.02	18	Re-Lamp/Re-Ballast	Sylvania Lamp FO17/841/SS/ECO Sylvania Ballast QHE 1X32T8/UNV ISN-SC	1	20	1	0.02	16	0.00	2	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$20.00	$40.00	$60.00	$10.00	217.01	$150.00	$50.00	$200.00	FALSE	434.03
2	1. Cafetorium	2300	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	30	3.27	7,521	Existing to Remain	0	4	109	0	3.27	7,521	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Cafetorium Exit	8760	LED Exit Lamp	1	2	2	0.00	35	Existing to Remain	0	1	2	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
23	1. Stage	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	14	0.81	2,468	Existing to Remain	0	2	58	0	0.81	2,468	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
23	1. Cafetorium Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	209.53
23	1. Cafetorium Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Industrial/Chain Pendant, No Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	209.53
28	1. Industrial Arts	1710	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt.	4	109	16	1.74	2,982	Existing to Remain	0	4	109	0	1.74	2,982	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	596	$86	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.24
1	1. Industrial Arts Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	35.01
1	1. Industrial Arts CPU	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	397	Existing to Remain	0	2	58	0	0.23	397	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	79	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	15.75
29	1. Industrial Arts Room	1710	1 Lamp, Incandescent 100w, Pendant Mnt.	1	100	2	0.20	342	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	2	0.05	89	0.15	253	$36	0	No New Controls	0	0.0%	0	$0	$20.00	$60.00	$80.00	$14.00	1.81	$0.00	$0.00	$0.00	FALSE	-
30	1. Industrial Arts Room	1710	1 Lamp, Compact Flourescent Light, 26w, Pendant Mnt.	1	28	2	0.06	96	Existing to Remain	0	1	28	0	0.06	96	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Industrial Arts Exit	8760	LED Exit Lamp	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
3	1. Vocal Music	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	12	0.98	1,683	Existing to Remain	0	3	82	0	0.98	1,683	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	337	$48	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	19.91
1	1. Vocal Music Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	35.01
3	1. Band/Orchestra	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	82	21	1.72	2,945	Existing to Remain	0	3	82	0	1.72	2,945	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	589	$85	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	11.38
1	1. Band/Orchestra Practice Room	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	35.01
1	1. Corridor by Cafeteria	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	12	0.70	2,297	Existing to Remain	0	2	58	0	0.70	2,297	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	1. Corridor by Cafeteria Exit	8760	LED Exit Lamp	1	2	2	0.00	35	Existing to Remain	0	1	2	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	1. Corridor by Gym	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	36	2.09	6,890	Existing to Remain	0	2	58	0	2.09	6,890	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
31	1. Corridor by Gym	3300	2x2, 2 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	34	2	0.07	224	Existing to Remain	0	2	34	0	0.07	224	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
1	2. Corridor Second Floor	3300	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	37	2.15	7,082	Existing to Remain	0	2	58	0	2.15	7,082	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
8	2. Corridor Second Floor Exits	8760	LED Exit Lamp	1	2	3	0.01	53	Existing to Remain	0	1	2	0	0.01	53	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
32	Exterior	4368	250w HPS, Pole Mounted Dual Head Shoebox	2	580	2	1.16	5,067	Retrofit	68 Watt, LED Retrofit Unit	2	136	2	0.27	1,188	0.89	3,879	$559	0	No New Controls	0	0.0%	0	$0	$1,060.00	$680.00	$1,740.00	$0.00	3.12	$0.00	$0.00	$0.00	FALSE	-
33	Exterior	4368	250w HPS, Pole Mounted Single Head Shoebox	1	285	10	2.85	12,449	Retrofit	68 Watt, LED Retrofit Unit	1	68	10	0.68	2,970	2.17	9,479	$1,365	0	No New Controls	0	0.0%	0	$0	$2,650.00	$1,700.00	$4,350.00	$0.00	3.19	$0.00	$0.00	$0.00	FALSE	-
34	Exterior	4368	250W HPS, Wall Mount Shoebox	1	285	9	2.57	11,204	Retrofit	68 Watt, LED Retrofit Unit	1	68	9	0.61	2,673	1.95	8,531	$1,228	0	No New Controls	0	0.0%	0	$0	$2,385.00	$1,530.00	$3,915.00	$0.00	3.19	$0.00	$0.00	$0.00	FALSE	-

			EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Fixture Reference #	Floor and Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
35	Exterior	4368	100W HPS, Wall Pack	1	128	7	0.90	3,914	Replace Fixture	60 Watt, LED Wall Pack	1	60	7	0.42	1,835	0.48	2,079	$299	0	No New Controls	0	0.0%	0	$0	$1,645.00	$1,190.00	$2,835.00	$700.00	7.13	$0.00	$0.00	$0.00	FALSE	-
36	Exterior	4368	250W HPS, Wall Mount Cylinder	1	285	4	1.14	4,980	Retrofit	68 Watt, LED Retrofit Unit	1	68	4	0.27	1,188	0.87	3,791	$546	0	No New Controls	0	0.0%	0	$0	$1,060.00	$680.00	$1,740.00	$0.00	3.19	$0.00	$0.00	$0.00	FALSE	-
37	Exterior	4368	100W HPS, 12x12 Recessed Mount	1	128	3	0.38	1,677	Retrofit	68 Watt, LED Retrofit Unit	1	68	3	0.20	891	0.18	786	$113	0	No New Controls	0	0.0%	0	$0	$795.00	$510.00	$1,305.00	$0.00	11.53	$0.00	$0.00	$0.00	FALSE	-
	TOTAL					**1,369**	**126**	**270,899**					**82**	**117**	**235,944**	**9**	**34,955**	**5,034**			**148**	**27**	**27,026**	**3,892**	**$18,610**	**$12,520**	**$31,130**	**$2,338**	**5.72**	**$45,650**	**$7,500**	**$53,150**	**$2,400.00**	**13.04**

CEG Project #: 9c12049
Facility Name: Orchard Valley Middle School
Address: 238 Pitman Downer Road
City, State, Zip Sewell, NJ 08080

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
C	1	Classroom 220	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 221	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
S	5	Storage Room	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
S	5	Storage Room	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	138.72
T	2	Stair 1	3420	1.5x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	7	0.41	1,389	Existing to Remain	0	2	58	0	0.41	1,389	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Stair 1 Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
C	1	Classroom 219	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
L	4	Faculty Planning	800	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	8	0.66	525	Existing to Remain	0	3	82	0	0.66	525	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	105	$15	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	20.70
C	1	Classroom 218	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	3,107	Existing to Remain	0	4	109	0	1.64	3,107	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	621	$90	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	10.71
C	1	Classroom 218/217 Prep Room	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	621	Existing to Remain	0	4	109	0	0.33	621	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	124	$18	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	17.48
C	1	Classroom 217	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	3,107	Existing to Remain	0	4	109	0	1.64	3,107	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	621	$90	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	10.71
C	1	Classroom 222	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 223	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 224	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 225	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	11	1.20	2,278	Existing to Remain	0	4	109	0	1.20	2,278	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	456	$66	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.04
C	1	Room 226	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	414	Existing to Remain	0	4	109	0	0.22	414	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	83	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	26.22
C	1	Classroom 227	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	11	1.20	2,278	Existing to Remain	0	4	109	0	1.20	2,278	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	456	$66	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	7.04
R	5	Boys Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
P	6	Mens Lav.	500	2 Lamp, 60w Incand., Wall Mount, Glass lens	2	120	1	0.12	60	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	2	56	1	0.06	28	0.06	32	$5	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$10.00	$30.00	$40.00	$7.00	7.11	$150.00	$50.00	$200.00	FALSE	246.31
P	7	Womens Lav.	500	1 Lamp, 60w Incand., Wall Mount, Prismatic Lens	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$10.00	$30.00	$40.00	$7.00	14.22	$150.00	$50.00	$200.00	FALSE	492.61
R	5	Girls Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
U	9	Custodial Room	800	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	20	Existing to Remain	0	1	25	0	0.03	20	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	344.83
C	1	Classroom 216	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	621	Existing to Remain	0	4	109	0	0.33	621	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	124	$18	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	17.48
C	4	Classroom 215	1900	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	12	0.98	1,870	Existing to Remain	0	3	82	0	0.98	1,870	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	374	$54	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	8.58

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
S	5	Storage Room	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	118.91
T	2	Stair 2	3420	1.5x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	7	0.41	1,389	Existing to Remain	0	2	58	0	0.41	1,389	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Stair 2 Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	1	Mech/Elec Room	800	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	138.41
U	5		800	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	93	Existing to Remain	0	2	58	0	0.12	93	0.00	0	$0				0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
C	1	Classroom 214	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	13	1.42	2,692	Existing to Remain	0	4	109	0	1.42	2,692	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	538	$78	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	5.96
C	11	Classroom 214 Storage	1900	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	220	Existing to Remain	0	2	58	0	0.12	220	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	44	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	31.29
C	1	Classroom 201	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 202	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 203	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 204	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 205	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 206	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
L	4	Faculty Planning	800	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	8	0.66	525	Existing to Remain	0	3	82	0	0.66	525	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	105	$15	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	30.55
T	2	Stair 3	3420	1.5x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt. Prismatic Lens	2	58	7	0.41	1,389	Existing to Remain	0	2	58	0	0.41	1,389	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Stair 3 Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
C	1	Classroom 207	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	5	CPU Room	1900	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	110	Existing to Remain	0	2	58	0	0.06	110	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	22	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	62.58
C	1	Classroom 208	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 209	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 210	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	3,107	Existing to Remain	0	4	109	0	1.64	3,107	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	621	$90	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	10.71
C	1	Classroom 211	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	15	1.64	3,107	Existing to Remain	0	4	109	0	1.64	3,107	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	621	$90	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	10.71
C	1	Classroom 210/211 Prep Room	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	621	Existing to Remain	0	4	109	0	0.33	621	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	124	$18	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	17.48
R	5	Boys Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
P	8	Mens Lav.	500	1 Lamp, 60w Incand., Wall Mount, Glass lens	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$10.00	$30.00	$40.00	$7.00	14.22	$150.00	$50.00	$200.00	FALSE	492.61

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
P	9	Womens Lav.	500	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	13	Existing to Remain	0	1	25	0	0.03	13	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	551.72
R	5	Girls Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
U	9	Custodial Room	800	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	20	Existing to Remain	0	1	25	0	0.03	20	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	344.83
C	1	Classroom 212	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 213	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
H	5	Second Floor Corridor	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	38	2.20	7,538	Existing to Remain	0	2	58	0	2.20	7,538	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Second Floor Corridor Exits	8760	LED Exit Sign	1	4	3	0.01	105	Existing to Remain	0	1	4	0	0.01	105	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
C	1	Classroom 101	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 102	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 103	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 104	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
U	5	A/V Room	800	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	139	Existing to Remain	0	2	58	0	0.17	139	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	28	$4	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	86.70
C	1	Classroom 105	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 106	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 107	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	13	1.42	2,692	Existing to Remain	0	4	109	0	1.42	2,692	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	538	$78	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	5.96
S	11	Classroom 107 Closet	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	118.91
S	5	Storage Room	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	138.72
C	1	Classroom 108	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 109	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
R	5	Girls Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
P	11	Womens Lav.	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
P	7	Womens Lav.	500	1 Lamp, 60w Incand., Wall Mount, Prismatic Lens	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$10.00	$30.00	$40.00	$7.00	14.22	$150.00	$50.00	$200.00	FALSE	492.61
R	5	Boys Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
U	9	Custodial Closet	800	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	20	Existing to Remain	0	1	25	0	0.03	20	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	344.83
C	1	Classroom 110	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
C	1	Classroom 111	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 112	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 113	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 114	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 115	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 116	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 117	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Classroom 118	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
L	1	Faculty Planning	800	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	3	0.33	262	Existing to Remain	0	4	109	0	0.33	262	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	52	$8	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	41.52
S	5	Storage Room	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	138.72
S	5	Storage Room	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	138.72
P	7	Mens Lav.	500	1 Lamp, 60w Incand., Wall Mount, Prismatic Lens	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$10.00	$30.00	$40.00	$7.00	14.22	$150.00	$50.00	$200.00	FALSE	492.61
R	5	Boys Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
P	9	Womens Lav.	500	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	13	Existing to Remain	0	1	25	0	0.03	13	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	551.72
R	5	Girls Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	79	$12	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	30.42
U	7	Custodial Closet	800	1 Lamp, 60w Incand., Wall Mount, Prismatic Lens	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	22	0.03	26	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.89	$150.00	$50.00	$200.00	FALSE	307.88
H	5	Corridor (113 to 118)	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	14	0.81	2,777	Existing to Remain	0	2	58	0	0.81	2,777	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Corridor (113 to 105) Exits	8760	LED Exit Sign	1	4	5	0.02	175	Existing to Remain	0	1	4	0	0.02	175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	5	Corridor - First Floor Center	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	30	1.74	5,951	Existing to Remain	0	2	58	0	1.74	5,951	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Corridor - First Floor Center Exits	8760	LED Exit Sign	1	4	5	0.02	175	Existing to Remain	0	1	4	0	0.02	175	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
N	5	Nurse Waiting Area	1900	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	220	Existing to Remain	0	2	58	0	0.12	220	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	5	Nurse Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	60	$9	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	23.18
C	5	Nurse Main Area	1900	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	12	0.70	1,322	Existing to Remain	0	2	58	0	0.70	1,322	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
P	5	Nurse Lav.	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
X	3	Nurse Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
C	5	Guidance Waiting	1900	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	7	0.41	771	Existing to Remain	0	2	58	0	0.41	771	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	5	Guidance Office 1	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	60	$9	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	23.18
O	5	Guidance Office 2	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	60	$9	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	23.18
O	5	Guidance Office 3	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	60	$9	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	23.18
O	5	Guidance Conference Room	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	298	Existing to Remain	0	2	58	0	0.17	298	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	60	$9	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	40.56
A	4	Main Office	2330	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	11	0.90	2,102	Existing to Remain	0	3	82	0	0.90	2,102	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	4	Principal Office	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	4	0.33	561	Existing to Remain	0	3	82	0	0.33	561	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.37
P	9	Main Office Lav.	500	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	13	Existing to Remain	0	1	25	0	0.03	13	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	551.72
O	4	Main Office Conference Room	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	6	0.49	841	Existing to Remain	0	3	82	0	0.49	841	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	168	$24	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	12.91
O	4	Attendance Office	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	2	0.16	280	Existing to Remain	0	3	82	0	0.16	280	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	56	$8	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	24.59
O	1		1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	1	0.11	186	Existing to Remain	0	4	109	0	0.11	186	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	37	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	64.75
O	4	Assistant Principal Office	1710	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	4	0.33	561	Existing to Remain	0	3	82	0	0.33	561	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	112	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.37
C	4	SGI	1900	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	4	0.33	623	Existing to Remain	0	3	82	0	0.33	623	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	125	$18	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	17.43
C	4	Room 100	1900	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	4	0.33	623	Existing to Remain	0	3	82	0	0.33	623	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	125	$18	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	17.43
S	11	IT Room	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	8	0.46	232	Existing to Remain	0	2	58	0	0.46	232	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	46	$7	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	52.02
M	11	Media Center	1900	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	98	5.68	10,800	Existing to Remain	0	2	58	0	5.68	10,800	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
M	3	Media Center	1900	LED Exit Sign	1	4	2	0.01	15	Existing to Remain	0	1	4	0	0.01	15	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
M	1	Media Center Office	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	6	0.65	1,243	Existing to Remain	0	4	109	0	0.65	1,243	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	249	$36	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	8.74
U	11	Elevator Machine Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	148.63
U	5	Equipment Room	800	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	139	Existing to Remain	0	2	58	0	0.17	139	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	28	$4	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	86.70
C	15	Computer Lab 119	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	15	Computer Lab 120	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., 1" Cell Parabolic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	$35.00	6.45
C	1	Room 122	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	6	0.65	1,243	Existing to Remain	0	4	109	0	0.65	1,243	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	249	$36	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	8.74
H	5	Corridor - Rear Area	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	37	2.15	7,339	Existing to Remain	0	2	58	0	2.15	7,339	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	3	Corridor - Rear Area	3420	LED Exit Sign	1	4	2	0.01	27	Existing to Remain	0	1	4	0	0.01	27	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
X	16	Corridor - Rear Area Exits	8760	2x2, 2 Lamp, T8 32w U-Lamp, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	73	4	0.29	2,558	Replace Fixture	2x2, 3 Lamp, T8 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	3	47	4	0.19	1,647	0.10	911	$132	0	No New Controls	0	0.0%	0	$0	$560.00	$640.00	$1,200.00	$0.00	9.08	$0.00	$0.00	$0.00	FALSE	-
C	5	Room 121A	1900	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	220	Existing to Remain	0	2	58	0	0.12	220	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	44	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	31.29
C	5	Room 121	1900	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	10	0.58	1,102	Existing to Remain	0	2	58	0	0.58	1,102	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	220	$32	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	$35.00	20.81
R	5	Boys Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	7	0.41	1,389	Existing to Remain	0	2	58	0	0.41	1,389	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	278	$40	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	8.69
P	5	Mens Lav.	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
P	5	Womens Lav.	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
R	5	Girls Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	7	0.41	1,389	Existing to Remain	0	2	58	0	0.41	1,389	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	278	$40	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	8.69
U	5	Custodial Closet	800	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	148.63
C	1	Drama 121	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	6	0.65	1,243	Existing to Remain	0	4	109	0	0.65	1,243	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	249	$36	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	8.74
O	5	Small Conference Room	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	34.77
G	5	Gymnasium Entrance	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	793	Existing to Remain	0	2	58	0	0.23	793	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	17	Weight Room	3420	18", 1 Lamp, 400W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	455	8	3.64	12,449	Replace Fixture	2x4 54w T5HO 6 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI654UNV	6	346	8	2.77	9,467	0.87	2,982	$432	0	No New Controls	0	0.0%	0	$0	$3,200.00	$1,600.00	$4,800.00	$400.00	10.18	$0.00	$0.00	$0.00	FALSE	-
X	1	Weight Room Exit	8760	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	1	0.11	955	Existing to Remain	0	4	109	0	0.11	955	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	17	Gymnasium	3420	18", 1 Lamp, 400W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	455	24	10.92	37,346	Replace Fixture	2x4 54w T5HO 6 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI654UNV	6	346	24	8.30	28,400	2.62	8,947	$1,297	0	No New Controls	0	0.0%	0	$0	$9,600.00	$4,800.00	$14,400.00	$1,200.00	10.18	$0.00	$0.00	$0.00	FALSE	-
S	11	Gymnasium Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	116	Existing to Remain	0	2	58	0	0.23	116	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	23	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	104.04
S	11	Gymnasium Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	116	Existing to Remain	0	2	58	0	0.23	116	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	23	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	104.04
X	4	Gymnasium Exits	8760	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	4	0.33	2,873	Existing to Remain	0	3	82	0	0.33	2,873	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	11	Boys Locker Room	3420	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	12	0.70	2,380	Existing to Remain	0	2	58	0	0.70	2,380	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	5	Boys Locker Room	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	793	Existing to Remain	0	2	58	0	0.23	793	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	5	Boys Locker Room Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	34.77
P	11	Boys Locker Room Office Lav.	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
P	13	Boys Locker Room Office Shower	500	4", 1 Lamp, 60w Incand., Recessed Can	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	0	No New Controls	0	0.0%	0	$0	$10.00	$30.00	$40.00	$7.00	14.22	$0.00	$0.00	$0.00	FALSE	-
S	5	Boys Locker Room Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	118.91
G	5	Boys Locker Room Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	11	Boys Locker Room Showers	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
S	13	Boys Locker Room Shower	500	4", 1 Lamp, 60w Incand., Recessed Can	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	0	No New Controls	0	0.0%	0	$0	$10.00	$30.00	$40.00	$7.00	14.22	$0.00	$0.00	$0.00	FALSE	-
X	3	Boys Locker Room Exits	8760	LED Exit Sign	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	11	Boys Locker Room Passage to Gym	3420	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	198	Existing to Remain	0	2	58	0	0.06	198	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Boys Locker Room Passage to Gym Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	11	Girls Locker Room	3420	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	12	0.70	2,380	Existing to Remain	0	2	58	0	0.70	2,380	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	5	Girls Locker Room	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	4	0.23	793	Existing to Remain	0	2	58	0	0.23	793	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	5	Girls Locker Room Office	1710	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	198	Existing to Remain	0	2	58	0	0.12	198	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	40	$6	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	34.77
P	11	Girls Locker Room Office Lav.	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
P	13	Girls Locker Room Office Shower	500	4", 1 Lamp, 60w Incand., Recessed Can	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	0	No New Controls	0	0.0%	0	$0	$10.00	$30.00	$40.00	$7.00	14.22	$0.00	$0.00	$0.00	FALSE	-
S	5	Girls Locker Room Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	118.91
G	5	Girls Locker Room Lav.	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	2	0.12	397	Existing to Remain	0	2	58	0	0.12	397	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	11	Girls Locker Room Showers	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	3	0.17	87	Existing to Remain	0	2	58	0	0.17	87	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	13	Girls Locker Room Shower	500	4", 1 Lamp, 60w Incand., Recessed Can	1	60	1	0.06	30	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	28	1	0.03	14	0.03	16	$2	0	No New Controls	0	0.0%	0	$0	$10.00	$30.00	$40.00	$7.00	14.22	$0.00	$0.00	$0.00	FALSE	-
X	3	Girls Locker Room Exits	8760	LED Exit Sign	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
G	11	Girls Locker Room Passage to Gym	3420	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	198	Existing to Remain	0	2	58	0	0.06	198	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Girls Locker Room Passage to Gym Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
C	1	Classroom 123	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	21	2.29	4,349	Existing to Remain	0	4	109	0	2.29	4,349	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	870	$126	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	7.65
O	1	Classroom 123 Office	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	16.65
O	1	Classroom 123 Practice Room	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	16.65
C	1	Classroom 124	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	12	1.31	2,485	Existing to Remain	0	4	109	0	1.31	2,485	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	13.39
C	18	Classroom 125	1900	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., Pirmatic Lens	4	109	18	1.96	3,728	Existing to Remain	0	4	109	0	1.96	3,728	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	2	20.0%	746	$108	$0.00	$0.00	$0.00	$0.00	-	$900.00	$100.00	$1,000.00	$35.00	8.93
C	3	Classroom 125 Exit	1900	LED Exit Sign	1	4	1	0.00	8	Existing to Remain	0	1	4	0	0.00	8	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	1	Classroom 125 Office	1710	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	2	0.22	373	Existing to Remain	0	4	109	0	0.22	373	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	75	$11	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	16.65
C	1	Classroom 125 Computer Room	1900	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	4	0.44	828	Existing to Remain	0	4	109	0	0.44	828	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	166	$24	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	7.49
C	19	Classroom 125 Finishing Room	1900	1 Lamp, 60w Incand., Wall Mount, Vaportite	1	60	4	0.24	456	Existing to Remain	0	1	60	0	0.24	456	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
U	11	Custodial Closet	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	148.63
U	20	Mechanical Room	800	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., Indust.	4	109	5	0.55	436	Existing to Remain	0	4	109	0	0.55	436	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	87	$13	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	24.91
U	12	Mechanical Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt. Industrial	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	260.11
U	12	Mechanical Room - Pump Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt. Industrial	2	58	3	0.17	139	Existing to Remain	0	2	58	0	0.17	139	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	28	$4	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	FALSE	173.40
U	20	Boiler Room	800	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., Indust.	4	109	6	0.65	523	Existing to Remain	0	4	109	0	0.65	523	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	105	$15	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	$35.00	43.83
U	20	Boiler Room	800	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., Indust.	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	20	Generator Room	800	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., Indust.	4	109	2	0.22	174	Existing to Remain	0	4	109	0	0.22	174	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	35	$5	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	62.28
U	20	Electric Service Room	800	1x8, 4 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., Indust.	4	109	1	0.11	87	Existing to Remain	0	4	109	0	0.11	87	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	17	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	138.41
F	4	Staff Lunch Room	1330	2x4, 3 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	3	82	5	0.41	545	Existing to Remain	0	3	82	0	0.41	545	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	109	$16	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	19.92
F	1	Cafetorium	1330	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	30	3.27	4,349	Existing to Remain	0	4	109	0	3.27	4,349	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Cafetorium Exits	8760	LED Exit Sign	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	21	Kitchen	1520	1x8, 4 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Gasketed.	4	109	13	1.42	2,154	Existing to Remain	0	4	109	0	1.42	2,154	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	22	Kitchen	1520	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Gasketed.	2	58	4	0.23	353	Existing to Remain	0	2	58	0	0.23	353	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	23	Kitchen	1520	4", 1 Lamp, 26w Compact Flour., Recessed Can	1	28	17	0.48	724	Existing to Remain	0	1	28	0	0.48	724	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	5	Kitchen Lockers	1520	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	88	Existing to Remain	0	2	58	0	0.06	88	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	18	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	78.23
P	9	Kitchen Lav.	500	1 Lamp, 20w Compact Flour., Wall Mount, Prismatic Lens	1	25	1	0.03	13	Existing to Remain	0	1	25	0	0.03	13	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	3	$0	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	551.72
K	1	Kitchen Office	1520	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	4	109	1	0.11	166	Existing to Remain	0	4	109	0	0.11	166	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	41.63
S	5	Kitchen Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	237.81
X	3	Kitchen Exit	8760	LED Exit Sign	1	4	1	0.00	35	Existing to Remain	0	1	4	0	0.00	35	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	12	Stage	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt. Industrial	2	58	14	0.81	650	Existing to Remain	0	2	58	0	0.81	650	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	3	Lift Room	800	LED Exit Sign	1	4	3	0.01	10	Existing to Remain	0	1	4	0	0.01	10	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	2	$0	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	1257.18
H	5	Corridor (123 to Mech Room)	3420	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt. Prismatic Lens	2	58	12	0.70	2,380	Existing to Remain	0	2	58	0	0.70	2,380	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	3	Corridor (123 to Mech Room) Exits	8760	LED Exit Sign	1	4	2	0.01	70	Existing to Remain	0	1	4	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	12	Cafeteria Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt. Industrial	2	58	4	0.23	116	Existing to Remain	0	2	58	0	0.23	116	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	23	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	104.04
S	12	Cafeteria Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt. Industrial	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	208.09

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
D	24	Exterior	4368	250W HPS, Dual Head Shoebox on Pole	2	580	2	1.16	5,067	Retrofit Lamp	68 Watt LED Retrofit Unit	2	136	2	0.27	1,188	0.89	3,879	$562	0	No New Controls	0	0.0%	0	$0	$1,060.00	$680.00	$1,740.00	$0.00	3.09	$0.00	$0.00	$0.00	FALSE	-
D	25	Exterior	4368	250W HPS, Single Head Shoebox on Pole	1	285	9	2.57	11,204	Retrofit Lamp	68 Watt LED Retrofit Unit	1	68	9	0.61	2,673	1.95	8,531	$1,237	0	No New Controls	0	0.0%	0	$0	$2,385.00	$1,530.00	$3,915.00	$0.00	3.17	$0.00	$0.00	$0.00	FALSE	-
D	26	Exterior	4368	250W HPS, Wall Mount Shoebox	1	285	12	3.42	14,939	Retrofit Lamp	68 Watt LED Retrofit	1	68	12	0.82	3,564	2.60	11,374	$1,649	0	No New Controls	0	0.0%	0	$0	$3,180.00	$2,040.00	$5,220.00	$0.00	3.17	$0.00	$0.00	$0.00	FALSE	-
D	27	Exterior	4368	100W HPS, Wall Pack	1	128	7	0.90	3,914	Replace Fixture	60 Watt, LED Wall Pack	1	60	7	0.42	1,835	0.48	2,079	$301	0	No New Controls	0	0.0%	0	$0	$1,645.00	$1,190.00	$2,835.00	$0.00	9.40	$0.00	$0.00	$0.00	FALSE	-
D	28	Exterior	4368	250W HPS, Wall Mount Cylinder	1	150	6	0.90	3,931	Retrofit	68 Watt, LED Retrofit Unit	1	68	6	0.41	1,782	0.49	2,149	$312	0	No New Controls	0	0.0%	0	$0	$1,590.00	$1,020.00	$2,610.00	$0.00	8.38	$0.00	$0.00	$0.00	FALSE	-
D	29	Exterior	4368	100W HPS, 12x12 Recessed Mount	1	150	3	0.45	1,966	Retrofit	68 Watt, LED Retrofit Unit	1	68	3	0.20	891	0.25	1,075	$156	0	No New Controls	0	0.0%	0	$0	$795.00	$510.00	$1,305.00	$0.00	8.38	$0.00	$0.00	$0.00	FALSE	-
		TOTAL					**1,385**	**135**	**312,489**					**85**	**124**	**270,377**	**11**	**42,112**	**6,106**			**151**	**28**	**30,256**	**4,387**	**$24,115**	**$14,310**	**$38,425**	**$1,670**	**6.02**	**$46,950**	**$7,550**	**$54,500**	**$2,460.00**	**11.86**

APPENDIX C: LIGHTING STUDY

Location			Existing Fixture Information											Retrofit Information											Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Kitchen	Recessed	S	CFL	12	1	13	Sw	24	365	0	156	1,367	N/A	Recessed	CFL	S	Sw	12	1	13	24	365	0	156	1367	0	0	0
2	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	365	0	39	28	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	365	0	39	28	0	0	0
3	1	Cafeteria	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	365	10	296	864	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	365	10	296	864	0	0	0
4	1	Teachers Lounge	Ceiling Suspended	E	4'T8	9	2	32	Sw	8	365	10	592	1,729	C	Ceiling Suspended	4'T8	E	OS	9	2	32	6	365	10	592	1296	0	432	432
5	1	Bathroom	Recessed	S	Inc	1	1	60	Sw	9	365	0	60	197	CFL	Recessed	CFL	S	Sw	1	1	20	9	365	0	20	66	131	0	131
6	1	Bathroom	Recessed	S	Inc	1	1	60	Sw	9	365	0	60	197	CFL	Recessed	CFL	S	Sw	1	1	20	9	365	0	20	66	131	0	131
7	1	Vestibule	Recessed	E	2'T8	1	2	17	Sw	16	365	4	38	222	N/A	Recessed	2'T8	E	Sw	1	2	17	16	365	4	38	222	0	0	0
8	1	Vestibule	Recessed	E	2'T8	1	2	17	Sw	16	365	4	38	222	N/A	Recessed	2'T8	E	Sw	1	2	17	16	365	4	38	222	0	0	0
9	1	Lobby showcase	Recessed	M	8'T8	1	1	59	Sw	8	365	7	66	193	N/A	Recessed	8'T8	M	Sw	1	1	59	8	365	7	66	193	0	0	0
10	1	Lobby showcase	Recessed	S	CFL	1	1	13	Sw	8	365	0	13	38	N/A	Recessed	CFL	S	Sw	1	1	13	8	365	0	13	38	0	0	0
11	1	Cafeteria	Recessed Parabolic	E	4'T8	44	4	32	Sw	12	241	20	6,512	18,833	N/A	Recessed Parabolic	4'T8	E	Sw	44	4	32	12	241	20	6512	18833	0	0	0
12	1	Cafeteria	Exit Sign	S	LED	3	1	5	N	24	365	1	17	146	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	146	0	0	0
13	1	Cafeteria	Recessed	S	CFL	6	1	13	Sw	24	241	0	78	451	N/A	Recessed	CFL	S	Sw	6	1	13	24	241	0	78	451	0	0	0
14	1	Cafeteria	Track	S	Inc	2	3	60	Sw	12	241	0	360	1,041	CFL	Track	CFL	S	Sw	2	3	20	12	241	0	120	347	694	0	694
15	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
16	1	Kitchen	Recessed	S	CFL	16	1	13	Sw	8	241	0	208	401	N/A	Recessed	CFL	S	Sw	16	1	13	8	241	0	208	401	0	0	0
17	1	Storage Room	Recessed	E	4'T8	1	4	32	Sw	2	241	20	148	71	N/A	Recessed	4'T8	E	Sw	1	4	32	2	241	20	148	71	0	0	0
18	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	241	0	39	19	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	241	0	39	19	0	0	0
19	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
20	1	Kitchen	Ceiling Mounted	E	4'T8	11	2	32	Sw	8	241	10	814	1,569	N/A	Ceiling Mounted	4'T8	E	Sw	11	2	32	8	241	10	814	1569	0	0	0
21	1	Locker Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
22	1	Kitchen	Ceiling Mounted	E	4'T8	6	2	32	Sw	8	241	10	444	856	C	Ceiling Mounted	4'T8	E	OS	6	2	32	6	241	10	444	642	0	214	214
23	1	Boiler Room	Ceiling Mounted	E	4'T8	10	2	32	Sw	2	241	10	740	357	N/A	Ceiling Mounted	4'T8	E	Sw	10	2	32	2	241	10	740	357	0	0	0
24	1	Boiler Room	Exit Sign	S	LED	2	1	5	N	24	365	1	11	98	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	98	0	0	0
25	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	24	241	10	74	428	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	24	241	10	74	428	0	0	0
26	1	Lobby	Recessed	E	4'T8	6	8	32	Sw	8	241	40	1,779	3,424	N/A	Recessed	4'T8	E	Sw	6	8	32	8	241	40	1776	3424	0	0	0
27	1	Lobby	Exit Sign	S	LED	3	1	5	N	24	365	1	17	146	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	146	0	0	0
28	1	Office Area-Attendance	Ceiling Mounted	E	4'T8	2	2	32	Sw	24	241	10	148	856	C	Ceiling Mounted	4'T8	E	OS	2	2	32	18	241	10	148	642	0	214	214
29	1	Nurse's Station	Ceiling Suspended	E	4'T8	10	2	32	Sw	8	241	10	740	1,427	N/A	Ceiling Suspended	4'T8	E	Sw	10	2	32	8	241	10	740	1427	0	0	0
30	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
31	1	Copy Room	Recessed	E	4'T8	2	2	32	Sw	2	241	10	148	71	N/A	Recessed	4'T8	E	Sw	2	2	32	2	241	10	148	71	0	0	0
32	1	Classroom-Guidance	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
33	1	Office	Recessed	E	4'T8	17	2	32	Sw	8	241	10	1,258	2,425	N/A	Recessed	4'T8	E	Sw	17	2	32	8	241	10	1258	2425	0	0	0
34	1	Office	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
35	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
36	1	Principal Office	Recessed	E	4'T8	5	2	32	Sw	8	241	10	370	713	N/A	Recessed	4'T8	E	Sw	5	2	32	8	241	10	370	713	0	0	0
37	1	Principal Office	Track	S	CFL	1	3	13	Sw	8	241	0	39	75	N/A	Track	CFL	S	Sw	1	3	13	8	241	0	39	75	0	0	0
38	1	Principal Office	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
39	1	Principals Office Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
40	1	Principals Office Bathroom	Wall Mounted	E	2'T8	1	1	17	Sw	4	241	2	18	18	N/A	Wall Mounted	2'T8	E	Sw	1	1	17	4	241	2	18	18	0	0	0
41	1	Office Area	Ceiling Suspended	E	4'T8	2	2	32	Sw	8	241	10	148	285	N/A	Ceiling Suspended	4'T8	E	Sw	2	2	32	8	241	10	148	285	0	0	0
42	1	Bathroom Men	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
43	1	Bathroom Women	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
44	1	Bathroom Women	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
45	1	Bathroom Men	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
46	1	Classroom	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,664	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1664	2996	0	0	0
47	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
48	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
49	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
50	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
51	1	Backstage Area	Ceiling Suspended	S	CFL	7	1	13	Sw	4	241	0	91	88	N/A	Ceiling Suspended	CFL	S	Sw	7	1	13	4	241	0	91	88	0	0	0
52	1	Backstage Area	Ceiling Suspended	S	Inc	1	1	60	Sw	4	241	0	60	58	CFL	Ceiling Suspended	CFL	S	Sw	1	1	20	4	241	0	20	19	39	0	39
53	1	Backstage Area	Ceiling Suspended	E	4'T8	10	4	32	Sw	4	241	20	1,480	1,427	C	Ceiling Suspended	4'T8	E	OS	10	4	32	3	241	20	1480	1070	0	357	357
54	1	Backstage Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
55	1	Backstage Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
56	1	Classroom	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,664	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1664	2996	0	0	0
57	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
58	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
59	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
60	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
61	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
62	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
63	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
64	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
65	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
66	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
67	1	Receiving Room	Ceiling Suspended	E	4'T8	5	2	32	Sw	2	241	10	370	178	N/A	Ceiling Suspended	4'T8	E	Sw	5	2	32	2	241	10	370	178	0	0	0
68	1	Copy room	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	8	241	10	148	285	0	0	0
69	1	Gymnasium	High Bay	S	MH	16	1	160	Sw	12	241	42	2,880	8,329	16	High Bay	4'T5	E	Sw	16	4	28	12	241	16	1820	5552	2777	0	2777
70	1	Gymnasium	Exit Sign	S	LED	2	1	5	N	24	365	1	11	98	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	98	0	0	0
71	1	Bathroom Men	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	295	428	0	143	143
72	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
73	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
74	1	Bathroom Women	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	295	428	0	143	143
75	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
76	1	Storage Room	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
77	1	Office	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	296	571	0	0	0
78	1	Computer Lab	Recessed	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	N/A	Recessed	4'T8	E	Sw	15	4	32	8	241	20	2220	4280	0	0	0
79	1	Office	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
80	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0

	Location		Existing Fixture Information											Retrofit Information											Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
80	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
81	1	Classroom	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
82	1	Classroom	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
83	1	Classroom	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
84	1	Classroom	Recessed	E	4'T8	5	4	32	Sw	8	241	20	740	1,427	N/A	Recessed	4'T8	E	Sw	5	4	32	8	241	20	740	1427	0	0	0
85	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
86	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	4	241	10	74	71	0	0	0
87	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	4	241	10	74	71	0	0	0
88	1	Bathroom Boy	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	8	241	10	74	107	0	36	36
89	1	Bathroom Girl	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	8	241	10	74	107	0	36	36
90	1	Bathroom Girl	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	8	241	20	444	642	0	214	214
91	1	Bathroom Boy	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	8	241	20	444	642	0	214	214
92	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
93	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
94	1	Classroom	Recessed	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	N/A	Recessed	4'T8	E	Sw	16	4	32	8	241	20	2368	4566	0	0	0
95	1	Classroom	Recessed	E	4'T8 U-Shaped	4	2	32	Sw	8	241	10	296	571	N/A	Recessed	4'T8 U-Shaped	E	Sw	4	2	32	8	241	10	296	571	0	0	0
96	1	Storage Room	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
97	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
98	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
99	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
100	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
101	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
102	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
103	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
104	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
105	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
106	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
107	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
108	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
109	1	Janitor's Closet	Ceiling Suspended	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Ceiling Suspended	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
110	1	Bathroom Men	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
111	1	Bathroom Women	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
112	1	Bathroom Women	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
113	1	Bathroom Men	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
114	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	12	241	4	266	768	N/A	Recessed	2'T8	E	Sw	7	2	17	12	241	4	266	768	0	0	0
115	1	Hallway	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
116	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
117	1	Library	Ceiling Mounted	E	4'T8	48	2	32	Sw	8	241	10	3,552	6,848	N/A	Ceiling Mounted	4'T8	E	Sw	48	2	32	8	241	10	3552	6848	0	0	0
118	1	Library	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
119	1	Office Area	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	241	10	296	571	0	0	0
120	1	Storage Room	Ceiling Suspended	S	CFL	2	1	13	Sw	2	241	0	26	13	N/A	Ceiling Suspended	CFL	S	Sw	2	1	13	2	241	0	26	13	0	0	0
121	1	Bathroom	Ceiling Mounted	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
122	1	Library	Ceiling Mounted	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
123	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
124	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
125	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
126	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
127	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
128	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
129	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
130	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
131	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
132	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
133	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
134	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
135	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
136	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
137	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
138	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
139	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
140	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
141	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
142	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
143	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
144	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
145	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
146	1	Janitor's Closet	Ceiling Suspended	E	4'T8	4	2	32	Sw	2	241	10	296	143	N/A	Ceiling Suspended	4'T8	E	Sw	4	2	32	2	241	10	296	143	0	0	0
147	1	Bathroom	Vanity	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
148	1	Bathroom	Vanity	E	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
149	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	12	241	0	13	38	N/A	Recessed	CFL	E	Sw	1	1	13	12	241	0	13	38	0	0	0
150	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	12	241	0	13	38	N/A	Recessed	CFL	E	Sw	1	1	13	12	241	0	13	38	0	0	0
151	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
152	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
153	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
154	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
155	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
156	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
157	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
158	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
159	Ext	Exterior	Wallpack	S	HPS	17	1	250	T	12	365	50	5,100	22,338	PSMH	Wallpack	PSMH	S	T	17	1	150	12	365	30	3060	13403	8935	0	8935
160	Ext	Exterior	Wallpack	S	HPS	10	1	150	T	12	365	30	1,800	7,884	PSMH	Wallpack	PSMH	S	T	10	1	150	12	365	20	1200	5256	2628	0	2628
161	Ext	Exterior	Pole Mounted	S	HPS	7	1	400	PC	12	365	80	3,360	14,717	PSMH	Pole Mounted	PSMH	S	PC	7	1	250	12	365	50	2100	9198	5519	0	5519
		Totals:				872	321	4,948				1,421	83,795	193,411						872	374	4,286			1,335	78,495	170,446	20,893	2,073	22,966

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

	Location		Existing Fixture Information											Retrofit Information											Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use (kWh/year)	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use (kWh/year)	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Kitchen	Recessed	S	CFL	12	1	13	Sw	24	365	0	156	1,367	N/A	Recessed	CFL	S	Sw	12	1	13	24	365	0	156	1367	0	0	0
2	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	365	0	39	28	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	365	0	39	28	0	0	0
3	1	Cafeteria	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	365	10	296	864	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	365	10	296	864	0	0	0
4	1	Teachers Lounge	Ceiling Suspended	E	4'T8	8	2	32	Sw	8	365	10	592	1,729	C	Ceiling Suspended	4'T8	E	OS	8	2	32	6	365	10	592	1296	0	432	432
5	1	Bathroom	Recessed	S	Inc	1	1	60	Sw	9	365	0	60	197	CFL	Recessed	CFL	S	Sw	1	1	20	9	365	0	20	66	131	0	131
6	1	Bathroom	Recessed	S	Inc	1	1	60	Sw	9	365	0	60	197	CFL	Recessed	CFL	S	Sw	1	1	20	9	365	0	20	66	131	0	131
7	1	Vestibule	Recessed	E	2'T8	1	2	17	Sw	16	365	4	38	222	N/A	Recessed	2'T8	E	Sw	1	2	17	16	365	4	38	222	0	0	0
8	1	Vestibule	Recessed	E	2'T8	1	2	17	Sw	16	365	4	38	222	N/A	Recessed	2'T8	E	Sw	1	2	17	16	365	4	38	222	0	0	0
9	1	Lobby showcase	Recessed	M	8'T8	1	1	59	Sw	9	365	7	68	193	N/A	Recessed	8'T8	M	Sw	1	1	59	9	365	7	68	193	0	0	0
10	1	Lobby showcase	Recessed	S	CFL	1	1	13	Sw	9	365	0	13	38	N/A	Recessed	CFL	S	Sw	1	1	13	9	365	0	13	38	0	0	0
11	1	Cafeteria	Recessed Parabolic	E	4'T8	44	4	32	Sw	12	241	20	6,512	18,833	N/A	Recessed Parabolic	4'T8	E	Sw	44	4	32	12	241	20	6512	18833	0	0	0
12	1	Cafeteria	Exit Sign	S	LED	3	1	5	N	24	365	1	17	146	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	146	0	0	0
13	1	Cafeteria	Recessed	S	CFL	6	1	13	Sw	24	241	0	78	451	N/A	Recessed	CFL	S	Sw	6	1	13	24	241	0	78	451	0	0	0
14	1	Cafeteria	Track	S	Inc	2	3	60	Sw	12	241	0	360	1,041	CFL	Track	CFL	S	Sw	2	3	20	12	241	0	120	347	694	0	694
15	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
16	1	Kitchen	Recessed	S	CFL	16	1	13	Sw	8	241	0	208	401	N/A	Recessed	CFL	S	Sw	16	1	13	8	241	0	208	401	0	0	0
17	1	Storage Room	Recessed	E	4'T8	1	4	32	Sw	2	241	20	148	71	N/A	Recessed	4'T8	E	Sw	1	4	32	2	241	20	148	71	0	0	0
18	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	241	0	39	19	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	241	0	39	19	0	0	0
19	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
20	1	Kitchen	Ceiling Mounted	E	4'T8	11	2	32	Sw	8	241	10	814	1,569	N/A	Ceiling Mounted	4'T8	E	Sw	11	2	32	8	241	10	814	1569	0	0	0
21	1	Locker Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
22	1	Kitchen	Ceiling Mounted	E	4'T8	6	2	32	Sw	8	241	10	444	856	C	Ceiling Mounted	4'T8	E	OS	6	2	32	6	241	10	444	642	0	214	214
23	1	Boiler Room	Ceiling Mounted	E	4'T8	10	2	32	Sw	2	241	10	740	357	N/A	Ceiling Mounted	4'T8	E	Sw	10	2	32	2	241	10	740	357	0	0	0
24	1	Boiler Room	Exit Sign	S	LED	2	1	5	N	24	365	1	11	98	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	98	0	0	0
25	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	24	241	10	74	428	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	24	241	10	74	428	0	0	0
26	1	Lobby	Recessed	E	4'T8	6	6	32	Sw	8	241	40	1,779	3424	N/A	Recessed	4'T8	E	Sw	6	6	32	8	241	40	1776	3424	0	0	0
27	1	Lobby	Exit Sign	S	LED	3	1	5	N	24	365	1	17	146	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	146	0	0	0
28	1	Office Area-Attendance	Ceiling Mounted	E	4'T8	2	2	32	Sw	24	241	10	148	856	C	Ceiling Mounted	4'T8	E	OS	2	2	32	18	241	10	148	642	0	214	214
29	1	Nurse's Station	Ceiling Suspended	E	4'T8	10	2	32	Sw	8	241	10	740	1,427	N/A	Ceiling Suspended	4'T8	E	Sw	10	2	32	8	241	10	740	1427	0	0	0
30	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	9	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	9	241	0	13	25	0	0	0
31	1	Copy Room	Recessed	E	4'T8	2	2	32	Sw	2	241	10	148	71	N/A	Recessed	4'T8	E	Sw	2	2	32	2	241	10	148	71	0	0	0
32	1	Classroom-Guidance	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
33	1	Office	Recessed	E	4'T8	17	2	32	Sw	8	241	10	1,258	2,425	N/A	Recessed	4'T8	E	Sw	17	2	32	8	241	10	1259	2425	0	0	0
34	1	Office	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
35	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
36	1	Principal Office	Recessed	E	4'T8	5	2	32	Sw	8	241	10	370	713	N/A	Recessed	4'T8	E	Sw	5	2	32	8	241	10	370	713	0	0	0
37	1	Principal Office	Track	S	CFL	1	3	13	Sw	8	241	0	38	75	N/A	Track	CFL	S	Sw	1	3	13	8	241	0	39	75	0	0	0
38	1	Principal Office	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
39	1	Principals Office Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
40	1	Principals Office Bathroom	Wall Mounted	E	2'T8	1	1	17	Sw	4	241	2	18	18	N/A	Wall Mounted	2'T8	E	Sw	1	1	17	4	241	2	19	18	0	0	0
41	1	Office Area	Ceiling Suspended	E	4'T8	2	2	32	Sw	8	241	10	148	285	N/A	Ceiling Suspended	4'T8	E	Sw	2	2	32	8	241	10	148	285	0	0	0
42	1	Bathroom Men	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
43	1	Bathroom Women	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
44	1	Bathroom Women	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
45	1	Bathroom Men	Recessed	S	CFL	2	1	13	Sw	9	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	9	241	0	26	50	0	0	0
46	1	Classroom	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,664	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1664	2996	0	0	0
47	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
48	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
49	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
50	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
51	1	Backstage Area	Ceiling Suspended	S	CFL	7	1	13	Sw	4	241	0	91	88	N/A	Ceiling Suspended	CFL	S	Sw	7	1	13	4	241	0	91	88	0	0	0
52	1	Backstage Area	Ceiling Suspended	S	Inc	1	1	60	Sw	4	241	0	60	58	CFL	Ceiling Suspended	CFL	S	Sw	1	1	20	4	241	0	20	19	39	0	39
53	1	Backstage Area	Ceiling Suspended	E	4'T8	10	4	32	Sw	4	241	20	1,480	1,427	C	Ceiling Suspended	4'T8	E	OS	10	4	32	3	241	20	1480	1070	0	357	357
54	1	Backstage Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
55	1	Backstage Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
56	1	Classroom	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,664	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1664	2996	0	0	0
57	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
58	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
59	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
60	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
61	1	Storage Room	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
62	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
63	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
64	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
65	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
66	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
67	1	Receiving Room	Ceiling Suspended	E	4'T8	5	2	32	Sw	2	241	10	370	178	N/A	Ceiling Suspended	4'T8	E	Sw	5	2	32	2	241	10	370	178	0	0	0
68	1	Copy room	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	8	241	10	148	285	0	0	0
69	1	Gymnasium	High Bay	S	MH	16	1	150	Sw	12	241	42	2,880	8,329	T6	High Bay	4'T5	E	Sw	16	4	28	12	241	16	1820	5552	2777	0	2777
70	1	Gymnasium	Exit Sign	S	LED	2	1	5	N	24	365	1	11	98	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	98	0	0	0
71	1	Bathroom Men	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
72	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
73	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
74	1	Bathroom Women	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
75	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
76	1	Storage Room	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
77	1	Office	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
78	1	Computer Lab	Recessed	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	N/A	Recessed	4'T8	E	Sw	15	4	32	8	241	20	2220	4280	0	0	0
79	1	Office	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
80	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0

	Location		Existing Fixture Information											Retrofit Information											Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
80	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
81	1	Classroom	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
82	1	Classroom	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
83	1	Classroom	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
84	1	Classroom	Recessed	E	4'T8	5	4	32	Sw	8	241	20	740	1,427	N/A	Recessed	4'T8	E	Sw	5	4	32	8	241	20	740	1427	0	0	0
85	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
86	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	4	241	10	74	71	0	0	0
87	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	4	241	10	74	71	0	0	0
88	1	Bathroom Boy	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	8	241	10	74	107	0	36	36
89	1	Bathroom Girl	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	8	241	10	74	107	0	36	36
90	1	Bathroom Girl	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	8	241	20	444	642	0	214	214
91	1	Bathroom Boy	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	8	241	20	444	642	0	214	214
92	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
93	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
94	1	Classroom	Recessed	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	N/A	Recessed	4'T8	E	Sw	16	4	32	8	241	20	2368	4566	0	0	0
95	1	Classroom	Recessed	E	4'T8 U-Shaped	4	2	32	Sw	8	241	10	296	571	N/A	Recessed	4'T8 U-Shaped	E	Sw	4	2	32	8	241	10	296	571	0	0	0
96	1	Storage Room	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
97	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
98	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
99	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
100	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
101	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
102	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
103	1	Classroom	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
104	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
105	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
106	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
107	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
108	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
109	1	Janitor's Closet	Ceiling Suspended	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Ceiling Suspended	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
110	1	Bathroom Men	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
111	1	Bathroom Women	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
112	1	Bathroom Women	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
113	1	Bathroom Men	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
114	1	Hallway	Recessed	E	2T8	7	2	17	Sw	12	241	4	266	768	N/A	Recessed	2T8	E	Sw	7	2	17	12	241	4	266	768	0	0	0
115	1	Hallway	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
116	1	Classroom	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
117	1	Library	Ceiling Mounted	E	4'T8	48	2	32	Sw	8	241	10	3,552	6,848	N/A	Ceiling Mounted	4'T8	E	Sw	48	2	32	8	241	10	3552	6848	0	0	0
118	1	Library	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
119	1	Office Area	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	241	10	296	571	0	0	0
120	1	Storage Room	Ceiling Suspended	S	CFL	2	1	13	Sw	2	241	0	26	13	N/A	Ceiling Suspended	CFL	S	Sw	2	1	13	2	241	0	26	13	0	0	0
121	1	Bathroom	Ceiling Mounted	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
122	1	Library	Ceiling Mounted	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
123	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
124	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
125	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
126	1	Storage Room	Recessed	E	2T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
127	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
128	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
129	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
130	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
131	1	Storage Room	Recessed	E	2T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
132	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
133	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
134	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
135	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
136	1	Storage Room	Recessed	E	2T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
137	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
138	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
139	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
140	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
141	1	Storage Room	Recessed	E	2T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
142	1	Storage Room	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
143	1	Classroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
144	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
145	1	Classroom	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
146	1	Janitor's Closet	Ceiling Suspended	E	4'T8	4	2	32	Sw	2	241	10	296	143	N/A	Ceiling Suspended	4'T8	E	Sw	4	2	32	2	241	10	296	143	0	0	0
147	1	Bathroom	Vanity	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
148	1	Bathroom	Vanity	E	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
149	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	12	241	0	13	38	N/A	Recessed	CFL	E	Sw	1	1	13	12	241	0	13	38	0	0	0
150	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	12	241	0	13	38	N/A	Recessed	CFL	E	Sw	1	1	13	12	241	0	13	38	0	0	0
151	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
152	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
153	1	Classroom	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
154	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
155	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
156	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
157	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
158	1	Office	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	10	74	143	0	0	0
159	Ext	Exterior	Wallpack	S	HPS	17	1	250	T	12	365	50	5,100	22,338	PSMH	Wallpack	PSMH	S	T	17	1	150	12	365	30	3060	13403	8935	0	8935
160	Ext	Exterior	Wallpack	S	HPS	10	1	150	T	12	365	30	1,800	7,884	PSMH	Wallpack	PSMH	S	T	10	1	150	12	365	20	1200	5256	2628	0	2628
161	Ext	Exterior	Pole Mounted	S	HPS	7	1	400	PC	12	365	80	3,360	14,717	PSMH	Pole Mounted	PSMH	S	PC	7	1	250	12	365	50	2100	9198	5519	0	5519
		Totals:				872	321	4,948				1,421	83,795	193,411						872	374	4,286			1,335	78,495	170,446	20,893	2,073	22,966

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

Location			Existing Fixture Information											Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Office (MAIN OFFICE)	Recessed Parabolic	E	4'T8	5	3	32	Sw	8	241	5	505	974	N/A	Recessed Parabolic	4'T8	E	Sw	5	3	32	8	241	5	505	974	0	0	0
2	1	Office Area (MAIN OFFICE AREA)	Recessed Parabolic	E	4'T8	9	3	32	Sw	8	241	5	909	1,753	N/A	Recessed Parabolic	4'T8	E	Sw	9	3	32	8	241	5	909	1753	0	0	0
3	1	Office (PRINCIPAL)	Recessed Parabolic	E	4'T8	3	3	32	Sw	8	241	5	303	584	C	Recessed Parabolic	4'T8	E	OS	3	3	32	6	241	5	303	438	0	146	146
4	1	Office (GUIDANCE)	Recessed Parabolic	E	4'T8	4	3	32	Sw	8	241	5	404	779	C	Recessed Parabolic	4'T8	E	OS	4	3	32	6	241	5	404	584	0	195	195
5	1	Office (CHILD STUDY)	Recessed Parabolic	E	4'T8	3	3	32	Sw	8	241	5	303	584	C	Recessed Parabolic	4'T8	E	OS	3	3	32	6	241	5	303	438	0	146	146
6	1	Nurse's Station (NURSE)	Recessed Parabolic	E	4'T8 U-Shaped	2	2	32	Sw	8	241	5	138	266	N/A	Recessed Parabolic	4'T8 U-Shaped	E	Sw	2	2	32	8	241	5	138	266	0	0	0
7	1	Nurse's Station (NURSE)	Recessed Parabolic	E	4'T8	8	3	32	Sw	8	241	5	808	1,558	N/A	Recessed Parabolic	4'T8	E	Sw	8	3	32	8	241	5	808	1558	0	0	0
8	1	Hallway (HALL)	Recessed Parabolic	E	4'T8	65	3	32	Sw	12	241	5	6,565	18,986	N/A	Recessed Parabolic	4'T8	E	Sw	65	3	32	12	241	5	6565	18986	0	0	0
9	1	Hallway (HALL)	Recessed Parabolic	S	Inc	13	1	60	Sw	12	241	0	780	2,256	CFL	Recessed Parabolic	CFL	S	Sw	13	1	20	12	241	0	260	752	1504	0	1504
10	1	Office Area (XEROX)	Recessed Parabolic	E	4'T8	4	3	32	Sw	8	241	5	404	779	C	Recessed Parabolic	4'T8	E	OS	4	3	32	6	241	5	404	584	0	195	195
11	1	Gymnasium (GYM)	Parabolic Ceiling Suspended	S	LED	9	1	150	Sw	8	241	15	1,485	2,863	N/A	Parabolic Ceiling Suspended	LED	S	Sw	9	1	150	8	241	15	1485	2863	0	0	0
12	1	Locker Room (LOCKER BOYS)	Recessed Parabolic	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Recessed Parabolic	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
13	1	Locker Room (LOCKER BOYS)	Recessed Parabolic	E	4'T8	2	2	32	Sw	8	241	5	138	266	C	Recessed Parabolic	4'T8	E	OS	2	2	32	6	241	5	138	200	0	67	67
14	1	Locker Room (LOCKER GIRLS)	Recessed Parabolic	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Recessed Parabolic	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
15	1	Locker Room (LOCKER GIRLS)	Recessed Parabolic	E	4'T8	2	2	32	Sw	8	241	5	138	266	C	Recessed Parabolic	4'T8	E	OS	2	2	32	6	241	5	138	200	0	67	67
16	1	Office (OFFICE)	Recessed Parabolic	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Recessed Parabolic	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
17	1	Office (118)	Recessed Parabolic	E	4'T8	4	3	32	Sw	8	241	5	404	779	C	Recessed Parabolic	4'T8	E	OS	4	3	32	6	241	5	404	584	0	195	195
18	1	Storage Closet (STORAGE)	Parabolic Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	5	69	33	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	5	69	33	0	0	0
19	1	Bathroom Men (BOYS)	Recessed Parabolic	E	4'T8	1	3	32	Sw	8	241	5	101	195	C	Recessed Parabolic	4'T8	E	OS	1	3	32	6	241	5	101	146	0	49	49
20	1	Bathroom Women (GIRLS)	Recessed Parabolic	E	4'T8	1	3	32	Sw	8	241	5	101	195	C	Recessed Parabolic	4'T8	E	OS	1	3	32	6	241	5	101	146	0	49	49
21	1	Lunch Room (FACULTY)	Recessed Parabolic	E	4'T8	8	3	32	Sw	8	241	5	808	1,558	C	Recessed Parabolic	4'T8	E	OS	8	3	32	6	241	5	808	1168	0	389	389
22	1	Storage Room (GYM STORAGE)	Recessed Parabolic	E	4'T8	5	3	32	Sw	2	241	5	505	243	N/A	Recessed Parabolic	4'T8	E	Sw	5	3	32	2	241	5	505	243	0	0	0
23	1	Office (103)	Recessed Parabolic	E	4'T8	4	3	32	Sw	8	241	5	404	779	C	Recessed Parabolic	4'T8	E	OS	4	3	32	6	241	5	404	584	0	195	195
24	1	Classroom (104)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	5	1,035	1,995	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	5	1035	1995	0	0	0
25	1	Classroom (105)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	5	1,035	1,995	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	5	1035	1995	0	0	0
26	1	Classroom (106)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	5	1,035	1,995	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	5	1035	1995	0	0	0
27	1	Classroom (107)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	5	1,035	1,995	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	5	1035	1995	0	0	0
28	1	Bathroom Men (BOYS2)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
29	1	Bathroom Women (GIRLS2)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
30	1	Bathroom Men (BOYS3)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
31	1	Bathroom Women (GIRLS3)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
32	1	Storage Closet (PTO STORAGE)	Parabolic Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	5	69	33	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	5	69	33	0	0	0
33	1	Classroom (114)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
34	1	Classroom (115)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
35	1	Classroom (116)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
36	1	Classroom (117)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
37	1	Classroom (108)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
38	1	Classroom (109)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
39	1	Classroom (110)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
40	1	Classroom (111)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
41	1	Classroom (112)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
42	1	Classroom (113)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
43	1	Classroom (121)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
44	1	Classroom (122)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
45	1	Classroom (124)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
46	1	Classroom (121)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
47	1	Classroom (122)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
48	1	Classroom (123)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
49	1	Classroom (124)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
50	1	Bathroom Men (BOYS4)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
51	1	Bathroom Women (GIRLS4)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
52	1	Classroom (126)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
53	1	Classroom (127)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
54	1	Classroom (128)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
55	1	Classroom (129)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	208	5	1,035	1,722	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	208	5	1035	1722	0	0	0
56	1	Bathroom Men (BOYS5)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
57	1	Bathroom Women (GIRLS5)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
58	1	Classroom (131)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
59	1	Classroom (132)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0

Location			Existing Fixture Information											Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
60	1	Classroom (133)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
61	1	Classroom (134)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
62	1	Classroom (135)	Recessed Parabolic	E	4'T8	12	4	32	Sw	8	208	5	1,596	2,656	N/A	Recessed Parabolic	4'T8	E	Sw	12	4	32	8	208	5	1596	2656	0	0	0
63	1	Classroom (130)	Recessed Parabolic	E	4'T8	6	3	32	Sw	8	208	5	606	1,008	N/A	Recessed Parabolic	4'T8	E	Sw	6	3	32	8	208	5	606	1008	0	0	0
64	1	Bathroom Men (BOYS6)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
65	1	Bathroom Women (GIRLS6)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	C	Parabolic Ceiling Mounted	4'T8	E	OS	2	3	32	6	241	5	202	292	0	97	97
66	1	Classroom (119)	Recessed Parabolic	E	4'T8	16	4	32	Sw	8	241	5	2,128	4,103	N/A	Recessed Parabolic	4'T8	E	Sw	16	4	32	8	241	5	2128	4103	0	0	0
67	1	Office (MUSIC OFFICE)	Recessed Parabolic	E	4'T8	14	4	32	Sw	8	241	5	1,862	3,590	C	Recessed Parabolic	4'T8	E	OS	14	4	32	6	241	5	1862	2692	0	897	897
68	1	Library (LIBRA)	Recessed Parabolic	E	4'T8	26	4	32	Sw	8	241	5	3,458	6,667	N/A	Recessed Parabolic	4'T8	E	Sw	26	4	32	8	241	5	3458	6667	0	0	0
69	1	Library (LIBRA)	Recessed Parabolic	E	Hal	10	1	75	Sw	8	241	17	915	1,764	CFL	Recessed Parabolic	CFL	E	Sw	10	1	25	8	241	0	250	482	1282	0	1282
70	1	Library (LIBRA)	Parabolic Ceiling Mounted	E	4'T8	18	2	32	Sw	8	241	5	1,242	2,395	N/A	Parabolic Ceiling Mounted	4'T8	E	Sw	18	2	32	8	241	5	1242	2395	0	0	0
71	1	Library (LIBRA)	Recessed Parabolic	E	2'T8	9	4	17	Sw	8	241	2	630	1,215	N/A	Recessed Parabolic	2'T8	E	Sw	9	4	17	8	241	2	630	1215	0	0	0
72	1	Bathroom Men (BOYS7)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	N/A	Parabolic Ceiling Mounted	4'T8	E	Sw	2	3	32	8	241	5	202	389	0	0	0
73	1	Bathroom Women (GIRLS7)	Parabolic Ceiling Mounted	E	4'T8	2	3	32	Sw	8	241	5	202	389	N/A	Parabolic Ceiling Mounted	4'T8	E	Sw	2	3	32	8	241	5	202	389	0	0	0
74	1	Storage Room (RECEIVING)	Parabolic Ceiling Suspended	E	4'T8	4	2	32	Sw	8	241	5	276	532	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	4	2	32	8	241	5	276	532	0	0	0
75	1	Storage Closet (STORAGE2)	Parabolic Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	5	69	133	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	1	2	32	8	241	5	69	133	0	0	0
76	1	Classroom (125)	Recessed Parabolic	E	4'T8	6	3	32	Sw	8	241	5	606	1,168	N/A	Recessed Parabolic	4'T8	E	Sw	6	3	32	8	241	5	606	1168	0	0	0
77	1	Cafeteria (ALL PURPOSE)	Recessed Parabolic	S	MH	6	1	250	Sw	8	241	70	1,920	3,702	LED	Recessed Parabolic	LED	S	Sw	6	1	150	8	241	15	990	1909	1793	0	1793
78	1	Kitchen (KITCHEN)	Recessed Parabolic	E	4'T8	10	4	32	Sw	8	241	5	1,330	2,564	N/A	Recessed Parabolic	4'T8	E	Sw	10	4	32	8	241	5	1330	2564	0	0	0
79	1	Office (KITCHEN OFFICE)	Recessed Parabolic	E	4'T8	3	4	32	Sw	8	241	5	399	769	C	Recessed Parabolic	4'T8	E	OS	3	4	32	6	241	5	399	577	0	192	192
80	1	Hallway (HALL)	Recessed Parabolic	E	4'T8 U-Shaped	6	2	32	Sw	12	241	5	414	1,197	N/A	Recessed Parabolic	4'T8 U-Shaped	E	Sw	6	2	32	12	241	5	414	1197	0	0	0
81	1	Office (100)	Recessed Parabolic	E	4'T8	4	3	32	Sw	8	241	5	404	779	C	Recessed Parabolic	4'T8	E	OS	4	3	32	6	241	5	404	584	0	195	195
82	1	Classroom (101)	Parabolic Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	5	1,035	1,995	N/A	Parabolic Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	5	1035	1995	0	0	0
83	1	Boiler Room (Boiler Room)	Ceiling Suspended	S	CFL	9	1	13	Sw	2	241	0	117	56	N/A	Ceiling Suspended	CFL	S	Sw	9	1	13	2	241	0	117	56	0	0	0
84	1	Exterior	Recessed	S	CFL	28	1	13	T	12	241	0	364	1,053	N/A	Recessed	CFL	S	T	28	1	13	12	241	0	364	1053	0	0	0
85	1	Exterior	Wallpack	S	HPS	9	1	250	T	12	241	50	2,700	7,808	PSMH	Wallpack	PSMH	S	T	9	1	150	12	241	30	1620	4685	3123	0	3123
86	1	Hallway	Exit Sign	S	LED	11	1	5	N	24	365	1	61	530	N/A	Exit Sign	LED	S	N	11	1	5	24	365	1	61	530	0	0	0
87	1	Hallway	Exit Sign	S	LED	4	1	25	N	24	365	3	110	964	LEDex	Exit Sign	LED	S	N	4	1	5	24	365	1	22	193	771	0	771
88	1	Hallway	Exit Sign	S	Inc	2	1	60	N	24	365	0	120	1,051	LEDex	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	955	0	955
Totals:						792	235	3,292				539	77,750	149,899						792	235	3,002			447	74,555	137,955	7,702	4,241	11,943

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

CEG Project #: 9C12049
Facility Name: Thomas Jefferson Elementary School
Address: 95 Altair Drive
City, State, Zip Turnersville, NJ 08012

	EXISTING FIXTURES								PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
O	2	1. Main Office	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	8	1. Principal's Office	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	53	$8	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	26.26
O	8	1. Assistant Principal's Office	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	53	$8	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	26.26
L	8	1. Work Room	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	132	Existing to Remain	0	2	58	0	0.06	132	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	26	$4	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	52.51
S	8	1. Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
O	8	1. Nurse's Office	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	53	$8	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	26.26
R	3	1. M.O. Lavatory	3040	10"x10", 1 Lamp, Incandescent 100w, Recessed Mnt., Prismatic Lens	1	100	1	0.10	304	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	79	0.07	225	$32	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	16	$2	$10.00	$30.00	$40.00	$7.00	1.02	$150.00	$50.00	$200.00	FALSE	87.86
O	2	1. Source Office	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	249	Existing to Remain	0	4	109	0	0.11	249	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	50	$7	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	27.94
O	2	1. Source Office	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	1	0.11	249	Existing to Remain	0	4	109	0	0.11	249	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	50	$7	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	27.94
C	2	1. Classroom 15	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	9	0.98	2,237	Existing to Remain	0	4	109	0	0.98	2,237	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.89
C	2	Classroom 16	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	1. Classroom 17	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	4	1. Classroom 17 Lavatory	800	10"x10", 1 Lamp, Incandescent 100w, Recessed Mnt., Prismatic Lens	1	100	1	0.10	80	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.07	59	$9	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	3.87	$150.00	$50.00	$200.00	FALSE	333.87
P	5	1. Classroom 16 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
P	4	1. Classroom 15 Lavatory	800	10"x10", 1 Lamp, Incandescent 100w, Recessed Mnt., Prismatic Lens	1	100	1	0.10	80	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.07	59	$9	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	3.87	$150.00	$50.00	$200.00	FALSE	333.87
C	2	1. Classroom 18	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	4	1. Classroom 18 Lavatory	800	10"x10", 1 Lamp, Incandescent 100w, Recessed Mnt., Prismatic Lens	1	100	1	0.10	80	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.07	59	$9	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	3.87	$150.00	$50.00	$200.00	FALSE	333.87
H	1	1. Corridor (1)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	7	1. Corridor (1) Exit	3040	LED Exit	1	2	1	0.00	6	Existing to Remain	0	1	2	0	0.00	6	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	1	1. Corridor (2)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	8	1. Nurse / Health	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
O	2	1. Nurse / Health	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	497	Existing to Remain	0	4	109	0	0.22	497	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
P	4	1. Nurse Lavatory	800	10"x10", 1 Lamp, Incandescent 100w, Recessed Mnt., Prismatic Lens	1	100	1	0.10	80	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.07	59	$9	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	3.87	$150.00	$50.00	$200.00	FALSE	333.87
O	8	1. Nurse's office	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	132	Existing to Remain	0	2	58	0	0.06	132	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	26	$4	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	52.51

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
O	8	1. A/V Room	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	132	Existing to Remain	0	2	58	0	0.06	132	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	26	$4	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	52.51
H	1	1. Corridor (3)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	1	1. Custodial Closet	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
V	2	1. Classroom 21	800	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	11	1.20	959	Existing to Remain	0	4	109	0	1.20	959	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	192	$28	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	11.40
C	2	1. Reading Room	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	1,491	Existing to Remain	0	4	109	0	0.65	1,491	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	298	$43	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	7.34
O	2	Guidance	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	5	0.55	1,243	Existing to Remain	0	4	109	0	0.55	1,243	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	249	$36	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	5.03
H	1	Corridor (4)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	176	Existing to Remain	0	2	58	0	0.06	176	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	1	Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
C	2	Classroom 2	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	1. Classroom 1	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	1. Classroom 4	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	1. Classroom 3	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	Classroom 6	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	4	Classroom 6 Lavatory	800	10"x10", 1 Lamp, Incandescent 100w, Recessed Mnt., Prismatic Lens	1	100	1	0.10	80	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.07	59	$9	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	3.87	$150.00	$50.00	$200.00	FALSE	333.87
H	1	Corridor	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	8	0.46	1,411	Existing to Remain	0	2	58	0	0.46	1,411	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	1	Custodian's Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
C	2	Music Room	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	8	0.87	1,988	Existing to Remain	0	4	109	0	0.87	1,988	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	398	$57	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	5.50
O	8	Music Office	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	132	Existing to Remain	0	2	58	0	0.06	132	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	26	$4	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	52.51
S	8	Music Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
S	8	Music Storage	500	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
U	1	Electrical Panel Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	93	Existing to Remain	0	2	58	0	0.12	93	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	19	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	74.83
C	2	1. Classroom 14	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 14 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
C	2	1. Classroom 13	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 13 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
C	2	1. Classroom 12	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 12 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
C	2	1. Classroom 11	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 11 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
C	2	1.Classroom 10	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 10 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
C	2	1. Classroom 9	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 9 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
O	2	1. Child Study Team Office #1	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	4	0.44	994	Existing to Remain	0	4	109	0	0.44	994	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	199	$29	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	11.00
O	2	1. Child Study Team Office #2	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	1,491	Existing to Remain	0	4	109	0	0.65	1,491	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	298	$43	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	7.34
P	5	1. Child Study Team Office Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
C	2	1. Classroom 7	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
P	5	1. Classroom 7 Lavatory	800	10"x10", 1 Lamp, Incandescent 60w	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
H	1	1. Corridor (6)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	9	0.52	1,587	Existing to Remain	0	2	58	0	0.52	1,587	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	1. Corridor (6) Exits	8760	LED Exit	1	2	4	0.01	70	Existing to Remain	0	1	2	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
L	2	1. Faculty	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	6	0.65	1,491	Existing to Remain	0	4	109	0	0.65	1,491	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	298	$43	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	7.34
P	1	1. Faculty Men's Lavatory	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
P	1	1. Faculty Women's Lavatory	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
R	1	1. Boys' Lavatory	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	71	$10	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	34.46
U	1	1. Custodial Closet	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
R	1	1. Girls' Lavatory	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	71	$10	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	34.46
H	1	1. Corridor (7)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	1. Corridor (7) Exits	8760	LED Exit	1	2	3	0.01	53	Existing to Remain	0	1	2	0	0.01	53	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	1	1. Corridor (8)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	1	1. Corridor (8)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
X	7	1. Corridor (8) Exits	8760	LED Exit	1	2	3	0.01	53	Existing to Remain	0	1	2	0	0.01	53	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
F	2	1. Cafeteria	2660	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	18	1.96	5,219	Existing to Remain	0	4	109	0	1.96	5,219	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
L	1	1. Cafeteria Work Room	2280	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	53	$8	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	26.26
H	15	1. Cafeteria Small Corridor	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	10	1. Platform Right	800	2x2, 2 Lamp, T8, 17w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	34	9	0.31	245	Existing to Remain	0	2	34	0	0.31	245	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	11	1. Platform Right Storage/Mechanical Loft	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., No Lens, Industrial / Chain	2	58	4	0.23	186	Existing to Remain	0	2	58	0	0.23	186	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	1. Platform Right Storage/Mechanical Loft Exit Signs	8760	LED Exit	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	12	1. Platform Left	800	Incandescent Track Fixtures	1	100	18	1.80	1,440	Existing to Remain	0	1	100	0	1.80	1,440	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
U	13	1. Platform Left	800	6" Dimmed Incandescent	1	100	2	0.20	160	Existing to Remain	0	1	100	0	0.20	160	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	1. Cafeteria Exits	8760	LED Exit	1	2	3	0.01	53	Existing to Remain	0	1	2	0	0.01	53	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	11	1. Cafeteria Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., No Lens, Industrial / Chain	2	58	4	0.23	116	Existing to Remain	0	2	58	0	0.23	116	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	23	$3	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	104.77
K	14	1. Kitchen	2280	2x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	16	0.93	2,116	Existing to Remain	0	2	58	0	0.93	2,116	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	15	1. Kitchen Dishwasher	2280	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	4	0.23	529	Existing to Remain	0	2	58	0	0.23	529	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	1	1. Kitchen Hood	2280	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	3	0.17	397	Existing to Remain	0	2	58	0	0.17	397	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	15	1. Kitchen	2280	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
K	1	1. Kitchen	2280	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	264	Existing to Remain	0	2	58	0	0.12	264	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	1	1. Kitchen Lockers	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
P	16	1. Kitchen Lavatory	800	12"X12", 1 Lamp, Incandescent 60w, Recessed Mnt, Opaque Lens	1	60	1	0.06	48	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	1	26	1	0.03	21	0.03	27	$4	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	4	$1	$10.00	$30.00	$40.00	$7.00	8.43	$150.00	$50.00	$200.00	FALSE	333.87
P	2	1. Kitchen Office	800	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	2	0.22	174	Existing to Remain	0	4	109	0	0.22	174	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	35	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	$20.00	35.84
X	7	1. Kitchen Exit	8760	LED Exit	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	1	1. Kitchen / Dry Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	4	0.23	116	Existing to Remain	0	2	58	0	0.23	116	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	23	$3	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	59.87
U	11	1. Receiving / Storage	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., No Lens, Industrial / Chain	2	58	6	0.35	278	Existing to Remain	0	2	58	0	0.35	278	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
S	9	1. Can Room	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
S	11	1. Gym Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., No Lens, Industrial / Chain	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	209.53
U	11	1. Mechanical / Electrical	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Pendant Mnt., No Lens, Industrial / Chain	2	58	9	0.52	418	Existing to Remain	0	2	58	0	0.52	418	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	2	20.0%	84	$12	$0.00	$0.00	$0.00	$0.00	-	$600.00	$100.00	$700.00	$35.00	55.29

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT						RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS					LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
S	1	1. Gym Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	29	Existing to Remain	0	2	58	0	0.06	29	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	6	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	239.46
G	21	1. Gym	2660	18", 1 Lamp, 250W Metal Halide, Magnetic Ballast, Pendant Mnt.	1	295	12	3.54	9,416	Replace Fixture	2x4 54w T5HO 4 Lamp w/Reflector, Lightolier TriLyte #FH4C5DVI454UNV	4	236	12	2.83	7,533	0.71	1,883	$271	0	No New Controls	0	0.0%	0	$0	$3,240.00	$2,040.00	$5,280.00	$600.00	17.26	$0.00	$0.00	$0.00	FALSE	-
G	8	1. Gym Low Ceiling	2660	2x4, 2 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	5	0.29	771	Existing to Remain	0	2	58	0	0.29	771	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	1. Gym Exits	8760	LED Exit	1	2	4	0.01	70	Existing to Remain	0	1	2	0	0.01	70	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
T	18	Stairs (3)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens, Direct/Indirect	2	58	4	0.23	705	Existing to Remain	0	2	58	0	0.23	705	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
C	2	2. Classroom 211	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	746	Existing to Remain	0	4	109	0	0.33	746	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	149	$21	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	14.67
C	2	2. Classroom 210	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	746	Existing to Remain	0	4	109	0	0.33	746	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	149	$21	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	14.67
R	1	2. Boys' Restroom	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	71	$10	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	34.46
R	1	2. Girls' Restroom	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	353	Existing to Remain	0	2	58	0	0.12	353	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	71	$10	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	FALSE	34.46
U	1	2. Custodian Room	800	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	1	0.06	46	Existing to Remain	0	2	58	0	0.06	46	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	9	$1	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	149.66
S	1	2. Art Storage	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
C	2	2. Art Room	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	9	0.98	2,237	Existing to Remain	0	4	109	0	0.98	2,237	0.00	0	$0	3	Dual Tech. Occupancy Sensor w/2 Pole Powerpack - Remote Mnt.	1	20.0%	447	$64	$0.00	$0.00	$0.00	$0.00	-	$450.00	$50.00	$500.00	FALSE	7.76
C	2	2. Classroom 101	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 102	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 103	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. CPU Room	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 115	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 116	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 107	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 108	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 109	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 110	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 111	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 112	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
C	2	2. Classroom 113	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40

				EXISTING FIXTURES						PROPOSED FIXTURE RETROFIT							RETROFIT ENERGY SAVINGS			PROPOSED LIGHTING CONTROLS						LIGHTING RETROFIT COSTS					LIGHTING CONTROLS COST				
Space Use Ref	Fixture Reference #	Location	Average Burn Hours	Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Work Description	Equipment Description	Lamps per Fixture	Watts per Fixture	Qty of Fixtures	Total kW	Usage kWh/Yr	Energy Savings, kW	Energy Savings, kWh	Energy Savings, $	Control Ref #	Controls Description	Qty of Controls	Hour Reduction %	Energy Savings, kWh	Energy Savings, $	Material	Total Labor	Total All	Rebate Estimate	Simple Payback	Total Materials	Total Labor	Total All	Smart Start Incentive	Simple Payback
C	2	2. Classroom 114	2280	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	10	1.09	2,485	Existing to Remain	0	4	109	0	1.09	2,485	0.00	0	$0	4	Dual Technology Occupancy Sensor - Remote Mnt.	1	20.0%	497	$72	$0.00	$0.00	$0.00	$0.00	-	$300.00	$50.00	$350.00	$35.00	4.40
S	1	2. Classroom 115 Closet	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
S	1	2. Storage (by 102)	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
S	1	2. Storage (by 114)	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	12	$2	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	119.73
S	2	2. Storage (by 211)	500	2x4, 4 Lamp, T8 32w, Elect. Ballast, Recessed Mnt., Prismatic Lens	4	109	3	0.33	164	Existing to Remain	0	4	109	0	0.33	164	0.00	0	$0	5	Dual Technology Occupancy Sensor - Switch Mnt.	1	20.0%	33	$5	$0.00	$0.00	$0.00	$0.00	-	$150.00	$50.00	$200.00	FALSE	42.47
S	1	2. Storage (by 211)	500	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	2	0.12	58	Existing to Remain	0	2	58	0	0.12	58	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
T	18	Stair 2	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens, Direct/Indirect	2	58	3	0.17	529	Existing to Remain	0	2	58	0	0.17	529	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	Stair 2 Exits	8760	LED Exit	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
T	18	Stair 1	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Surface Mnt., Prismatic Lens, Direct/Indirect	2	58	3	0.17	529	Existing to Remain	0	2	58	0	0.17	529	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
X	7	Stair 1 Exits	8760	LED Exit	1	2	1	0.00	18	Existing to Remain	0	1	2	0	0.00	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	1	Corridor (107-Art)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	8	0.46	1,411	Existing to Remain	0	2	58	0	0.46	1,411	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	7	Corridor (107-Art)	3040	LED Exit	1	2	3	0.01	18	Existing to Remain	0	1	2	0	0.01	18	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	1	Corridor (101-113)	3040	1x4, 2 Lamp, T8 32w, Elect. Ballast, Elect. Ballast, Recessed Mnt., Prismatic Lens	2	58	16	0.93	2,821	Existing to Remain	0	2	58	0	0.93	2,821	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
H	7	Corridor (101-113)	3040	LED Exit	1	2	4	0.01	24	Existing to Remain	0	1	2	0	0.01	24	0.00	0	$0	0	No New Controls	0	0.0%	0	$0	$0.00	$0.00	$0.00	$0.00	-	$0.00	$0.00	$0.00	FALSE	-
D	22	Exterior Parking Lot	4380	250W HPS, Single Head on Pole	1	285	5	1.43	6,242	Retrofit Lamp	68 Watt LED Retrofit	1	68	5	0.34	1,489	1.09	4,752	$684	0	No New Controls	0	0.0%	0	$0	$1,325.00	$850.00	$2,175.00	$0.00	3.18	$0.00	$0.00	$0.00	FALSE	-
D	23	Exterior (Rear Pole)	4380	250W HPS, Single Head Flood on Pole	1	285	1	0.29	1,248	Replace Fixture	68 Watt 16" LED Flood Light Fixture	1	68	1	0.07	298	0.22	950	$137	0	No New Controls	0	0.0%	0	$0	$245.00	$170.00	$415.00	$100.00	2.30	$0.00	$0.00	$0.00	FALSE	-
D	24	Exterior (Bldg. Mount)	4380	250W HPS, Wall Mount Shoebox	1	285	6	1.71	7,490	Retrofit Lamp	68 Watt LED Retrofit Unit	1	68	6	0.41	1,787	1.30	5,703	$821	0	No New Controls	0	0.0%	0	$0	$1,590.00	$1,020.00	$2,610.00	$0.00	3.18	$0.00	$0.00	$0.00	FALSE	-
D	25	Exterior (Bldg.)	4380	12"x12", 2 Lamp, Incandescent 60w, Recessed Mnt, Opaque Lens	2	120	15	1.80	7,884	Re-Lamp	Philips CFL Energy Saver 26w Mini Twister	2	52	15	0.78	3,416	1.02	4,468	$643	0	No New Controls	0	0.0%	0	$0	$150.00	$450.00	$600.00	$105.00	0.77	$0.00	$0.00	$0.00	FALSE	-
D	26	Exterior (Bldg. Mount)	4380	100W HPS, Wall Pack	1	128	7	0.90	3,924	Replace Fixture	60 Watt, LED Wall Pack	1	60	7	0.42	1,840	0.48	2,085	$300	0	No New Controls	0	0.0%	0	$0	$1,645.00	$1,190.00	$2,835.00	$700.00	7.11	$0.00	$0.00	$0.00	FALSE	-
S	19	Exterior Storage	500	1x4, 2 Lamp, T12 34w, Magnetic Ballast, Pendant Mnt., No Lens,, Industrial Fixture	2	80	3	0.24	120	Re-Lamp/Re-Ballast	Sylvania Lamp FO28/841/SS/ECO Sylvania Ballast QHE 2X32T8/UNV ISN-SC	2	49	3	0.15	74	0.09	47	$7	0	No New Controls	0	0.0%	0	$0	$60.00	$120.00	$180.00	$30.00	22.40	$0.00	$0.00	$0.00	FALSE	-
		TOTAL					**705**	**67**	**159,568**					**65**	**62**	**138,887**	**6**	**20,681**	**2,978**			**95**	**19**	**18,692**	**2,692**	**$8,415**	**$6,320**	**$14,735**	**$1,647**	**4.39**	**$21,450**	**$4,750**	**$26,200**	**$1,405.00**	**9.21**

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Cafeteria	Recessed Parabolic	E	4'T8	44	4	32	Sw	8	241	20	6,512	12,555	N/A	Recessed Parabolic	4'T8	E	Sw	44	4	32	8	241	20	6512	12555	0	0	0
2	1	Cafeteria	Exit Sign	S	LED	3	1	25	N	24	365	3	83	723	LEDex	Exit Sign	LED	S	N	3	1	5	24	365	1	17	145	578	0	578
3	1	Cafeteria	Recessed	S	CFL	6	1	13	Sw	8	241	0	78	150	N/A	Recessed	CFL	S	Sw	6	1	13	8	241	0	78	150	0	0	0
4	1	Cafeteria	Track	S	Inc	2	3	60	Sw	8	241	0	360	694	CFL	Track	CFL	S	Sw	2	3	20	8	241	0	120	231	463	0	463
5	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
6	1	Kitchen	Recessed	S	CFL	16	1	13	Sw	8	241	0	208	401	N/A	Recessed	CFL	S	Sw	16	1	13	8	241	0	208	401	0	0	0
7	1	Storage Room	Recessed	E	4'T8	1	4	32	Sw	2	241	20	148	71	N/A	Recessed	4'T8	E	Sw	1	4	32	2	241	20	148	71	0	0	0
8	1	Storage Room	Ceiling Mounted	S	CFL	3	1	13	Sw	2	241	0	39	19	N/A	Ceiling Mounted	CFL	S	Sw	3	1	13	2	241	0	39	19	0	0	0
9	1	Storage Room	Ceiling Mounted	S	Inc	1	1	60	Sw	2	241	0	60	29	CFL	Ceiling Mounted	CFL	S	Sw	1	1	20	2	241	0	20	10	19	0	19
10	1	Kitchen	Ceiling Mounted	E	4'T8	11	2	32	Sw	8	241	10	814	1,569	N/A	Ceiling Mounted	4'T8	E	Sw	11	2	32	8	241	10	814	1569	0	0	0
11	1	Locker Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Ceiling Mounted	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
12	1	Kitchen	Ceiling Mounted	E	4'T8	6	2	32	Sw	8	241	10	444	856	N/A	Ceiling Mounted	4'T8	E	Sw	6	2	32	8	241	10	444	856	0	0	0
13	1	Boiler Room	Ceiling Mounted	E	4'T8	10	2	32	Sw	2	241	10	740	357	C	Ceiling Mounted	4'T8	E	OS	10	2	32	2	241	10	740	268	0	89	89
14	1	Boiler Room	Exit Sign	S	LED	2	1	25	N	24	365	3	55	482	LEDex	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	385	0	385
15	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
16	1	Lobby	Recessed	E	4'T8	6	8	32	Sw	8	241	40	1,776	3,424	N/A	Recessed	4'T8	E	Sw	6	8	32	8	241	40	1776	3424	0	0	0
17	1	Lobby	Exit Sign	S	LED	3	1	25	N	24	365	3	83	723	LEDex	Exit Sign	LED	S	N	3	1	5	24	365	1	17	145	578	0	578
18	1	Office Area-Attendance	Ceiling Mounted	E	4'T8	2	2	32	Sw	8	241	10	148	285	C	Ceiling Mounted	4'T8	E	OS	2	2	32	6	241	10	148	214	0	71	71
19	1	Nurse's Station	Ceiling Suspended	E	4'T8	10	2	32	Sw	8	241	10	740	1,427	N/A	Ceiling Suspended	4'T8	E	Sw	10	2	32	8	241	10	740	1427	0	0	0
20	1	Bathroom	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
21	1	Copy Room	Recessed	E	4'T8	2	2	32	Sw	2	241	10	148	71	N/A	Recessed	4'T8	E	Sw	2	2	32	2	241	10	148	71	0	0	0
22	1	Classroom-Guidance	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
23	1	Office	Recessed	E	4'T8	17	2	32	Sw	8	241	10	1,258	2,425	C	Recessed	4'T8	E	OS	17	2	32	6	241	10	1258	1819	0	606	606
24	1	Office	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
25	1	Storage Room	Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
26	1	Principal Office	Recessed	E	4'T8	5	2	32	Sw	8	241	10	370	713	C	Recessed	4'T8	E	OS	5	2	32	6	241	10	370	535	0	178	178
27	1	Principal Office	Track	S	CFL	1	3	13	Sw	8	241	0	39	75	C	Track	CFL	S	OS	1	3	13	6	241	0	39	56	0	19	19
28	1	Principal Office	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
29	1	Principals Office Bathroom	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
30	1	Principals Office Bathroom	Wall Mounted	E	2'T8	1	1	17	Sw	4	241	2	19	18	N/A	Wall Mounted	2'T8	E	Sw	1	1	17	4	241	2	19	18	0	0	0
31	1	Office Area	Ceiling Suspended	E	4'T8	2	2	32	Sw	8	241	10	148	285	N/A	Ceiling Suspended	4'T8	E	Sw	2	2	32	8	241	10	148	285	0	0	0
32	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
33	1	Hallway	Recessed	E	2'T8	2	2	17	Sw	12	241	4	76	220	N/A	Recessed	2'T8	E	Sw	2	2	17	12	241	4	76	220	0	0	0
34	1	Electrical Room	Ceiling Suspended	S	CFL	2	1	13	Sw	2	241	0	26	13	N/A	Ceiling Suspended	CFL	S	Sw	2	1	13	2	241	0	26	13	0	0	0
35	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
36	1	Bathroom Men	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
37	1	Bathroom Women	Recessed	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
38	1	Bathroom Women	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
39	1	Bathroom Men	Recessed	S	CFL	2	1	13	Sw	8	241	0	26	50	N/A	Recessed	CFL	S	Sw	2	1	13	8	241	0	26	50	0	0	0
40	1	Hallway	Recessed	E	2'T8	8	2	17	Sw	9	241	4	304	659	N/A	Recessed	2'T8	E	Sw	8	2	17	9	241	4	304	659	0	0	0
41	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
42	1	Classroom (12)	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,554	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1554	2996	0	0	0
43	1	Bathroom (12)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
44	1	Storage Room (12)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
45	1	Storage Room (12)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
46	1	Classroom (12)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
47	1	Backstage Area	Ceiling Suspended	S	CFL	7	1	13	Sw	4	241	0	91	88	N/A	Ceiling Suspended	CFL	S	Sw	7	1	13	4	241	0	91	88	0	0	0
48	1	Backstage Area	Ceiling Suspended	S	Inc	1	1	60	Sw	4	241	0	60	58	CFL	Ceiling Suspended	CFL	S	Sw	1	1	20	4	241	0	20	19	39	0	39
49	1	Backstage Area	Ceiling Suspended	E	4'T8	10	4	32	Sw	4	241	20	1,480	1,427	N/A	Ceiling Suspended	4'T8	E	Sw	10	4	32	4	241	20	1480	1427	0	0	0
50	1	Backstage Area	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
51	1	Backstage Area	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
52	1	Classroom (10)	Ceiling Suspended	E	4'T8	21	2	32	Sw	8	241	10	1,554	2,996	N/A	Ceiling Suspended	4'T8	E	Sw	21	2	32	8	241	10	1554	2996	0	0	0
53	1	Bathroom (10)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
54	1	Classroom (10)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
55	1	Hallway	Recessed	E	2'T8	4	2	17	Sw	9	241	4	152	330	N/A	Recessed	2'T8	E	Sw	4	2	17	9	241	4	152	330	0	0	0
56	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
57	1	Janitor's Closet	Ceiling Suspended	S	CFL	2	1	13	Sw	2	241	0	26	13	N/A	Ceiling Suspended	CFL	S	Sw	2	1	13	2	241	0	26	13	0	0	0
58	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	9	241	4	266	577	N/A	Recessed	2'T8	E	Sw	7	2	17	9	241	4	266	577	0	0	0
59	1	Classroom (8)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
60	1	Bathroom (8)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
61	1	Storage Room (8)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
62	1	Storage Room (8)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
63	1	Classroom (8)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
64	1	Classroom (6)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
65	1	Bathroom (6)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
66	1	Classroom (6)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
67	1	Receiving Room	Ceiling Suspended	E	4'T8	5	2	32	Sw	2	241	10	370	178	N/A	Ceiling Suspended	4'T8	E	Sw	5	2	32	2	241	10	370	178	0	0	0
68	1	Hallway	Recessed	E	2'T8	4	2	17	Sw	9	241	4	152	330	N/A	Recessed	2'T8	E	Sw	4	2	17	9	241	4	152	330	0	0	0
69	1	Hallway	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
70	1	Hallway	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48	N/A	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	0	0	0
71	1	Hallway	Recessed	E	4'T8 U-Shaped	12	2	32	Sw	9	241	10	888	1,926	N/A	Recessed	4'T8 U-Shaped	E	Sw	12	2	32	9	241	10	888	1926	0	0	0
72	1	Copy room	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	8	241	10	148	285	0	0	0
73	1	Gymnasium (47)	High Bay	S	MH	15	1	250	Sw	8	241	70	4,800	9,254	LED	High Bay	LED	S	Sw	15	1	150	8	241	0	2250	4338	4916	0	4916
74	1	Gymnasium (47)	Exit Sign	S	LED	2	1	5	N	24	365	1	11	96	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	0	0	0
75	1	Bathroom Men (47)	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
76	1	Bathroom Men (47)	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
77	1	Bathroom Women (47)	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	6	241	10	74	107	0	36	36
78	1	Bathroom Women (47)	Recessed	E	4'T8	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8	E	OS	4	2	32	6	241	10	296	428	0	143	143
79	1	Janitor's Closet (47)	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
80	1	Storage Room (47)	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
81	1	Office (47)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
82	1	Hallway	Recessed	E	4'T8 U-Shaped	12	2	32	Sw	9	241	10	888	1,926	N/A	Recessed	4'T8 U-Shaped	E	Sw	12	2	32	9	241	10	888	1926	0	0	0
83	1	Hallway	Exit Sign	S	LED	2	1	5	N	24	365	1	11	96	N/A	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	0	0	0
84	1	Computer Lab (45)	Recessed	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	N/A	Recessed	4'T8	E	Sw	15	4	32	8	241	20	2220	4280	0	0	0
85	1	Office (45)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
86	1	Classroom (43)	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
87	1	Classroom (41)	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
88	1	Classroom (39)	Recessed	E	4'T8	6	4	32	Sw	8	241	20	888	1,712	N/A	Recessed	4'T8	E	Sw	6	4	32	8	241	20	888	1712	0	0	0
89	1	Classroom (34)	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
90	1	Classroom (34)	Recessed	E	4'T8	5	4	32	Sw	8	241	20	740	1,427	N/A	Recessed	4'T8	E	Sw	5	4	32	8	241	20	740	1427	0	0	0
91	1	Janitor's Closet	Ceiling Suspended	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Suspended	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
92	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	3	241	10	74	54	0	18	18
93	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	4	241	10	74	71	C	Recessed	4'T8 U-Shaped	E	OS	1	2	32	3	241	10	74	54	0	18	18
94	1	Bathroom Boy	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
95	1	Bathroom Girl	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
96	1	Bathroom Girl	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	6	241	20	444	642	0	214	214
97	1	Bathroom Boy	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	C	Recessed	4'T8	E	OS	3	4	32	6	241	20	444	642	0	214	214
98	1	Classroom (35)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
99	1	Classroom (37)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
100	1	Hallway	Recessed	E	4'T8 U-Shaped	5	2	32	Sw	9	241	10	370	803	N/A	Recessed	4'T8 U-Shaped	E	Sw	5	2	32	9	241	10	370	803	0	0	0
101	1	Hallway	Exit Sign	S	LED	3	1	5	N	24	365	1	17	145	N/A	Exit Sign	LED	S	N	3	1	5	24	365	1	17	145	0	0	0
102	1	Hallway	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	9	241	10	148	321	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	9	241	10	148	321	0	0	0
103	1	Hallway	Recessed	E	4'T8 U-Shaped	5	2	32	Sw	9	241	10	370	803	N/A	Recessed	4'T8 U-Shaped	E	Sw	5	2	32	9	241	10	370	803	0	0	0
104	1	Classroom (33)	Recessed	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	N/A	Recessed	4'T8	E	Sw	16	4	32	8	241	20	2368	4566	0	0	0
105	1	Classroom (33)	Recessed	E	4'T8 U-Shaped	4	2	32	Sw	8	241	10	296	571	N/A	Recessed	4'T8 U-Shaped	E	Sw	4	2	32	8	241	10	296	571	0	0	0
106	1	Storage Room (33)	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
107	1	Hallway	Recessed	E	4'T8 U-Shaped	10	2	32	Sw	12	241	10	740	2,140	N/A	Recessed	4'T8 U-Shaped	E	Sw	10	2	32	12	241	10	740	2140	0	0	0
108	1	Hallway	Exit Sign	S	LED	1	1	5	N	24	241	1	6	32	N/A	Exit Sign	LED	S	N	1	1	5	24	241	1	6	32	0	0	0
109	1	Classroom (32)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
110	1	Classroom (30)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
111	1	Classroom (31)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
112	1	Classroom (28)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
113	1	Classroom (29)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
114	1	Classroom (26)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
115	1	Classroom (27)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
116	1	Hallway	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	9	241	10	148	321	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	9	241	10	148	321	0	0	0
117	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
118	1	Hallway	Exit Sign	S	LED	2	1	25	N	24	365	3	55	482	LEDex	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	385	0	385
119	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	9	241	4	266	577	N/A	Recessed	2'T8	E	Sw	7	2	17	9	241	4	266	577	0	0	0
120	1	Classroom (24)	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
121	1	Classroom (22)	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
122	1	Classroom (23)	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
123	1	Classroom (25)	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
124	1	Classroom (21)	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
125	1	Janitor's Closet	Ceiling Suspended	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Ceiling Suspended	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
126	1	Bathroom Men	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
127	1	Bathroom Women	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
128	1	Bathroom Women	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
129	1	Bathroom Men	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
130	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	9	241	4	266	577	N/A	Recessed	2'T8	E	Sw	7	2	17	9	241	4	266	577	0	0	0
131	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
132	1	Classroom (19)	Ceiling Suspended	E	4'T8	15	1	32	Sw	8	241	5	555	1,070	N/A	Ceiling Suspended	4'T8	E	Sw	15	1	32	8	241	5	555	1070	0	0	0
133	1	Library	Ceiling Mounted	E	4'T8	48	2	32	Sw	8	241	10	3,552	6,848	N/A	Ceiling Mounted	4'T8	E	Sw	48	2	32	8	241	10	3552	6848	0	0	0
134	1	Library	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
135	1	Office Area	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	241	10	296	571	0	0	0
136	1	Storage Room	Ceiling Suspended	S	CFL	2	1	13	Sw	2	241	0	26	13	N/A	Ceiling Suspended	CFL	S	Sw	2	1	13	2	241	0	26	13	0	0	0
137	1	Bathroom	Ceiling Mounted	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
138	1	Library	Ceiling Mounted	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Mounted	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
139	1	Hallway	Recessed	E	2'T8	2	2	17	Sw	9	241	4	76	165	N/A	Recessed	2'T8	E	Sw	2	2	17	9	241	4	76	165	0	0	0
140	1	Hallway	Recessed	E	2'T8	5	2	17	Sw	9	241	4	190	412	N/A	Recessed	2'T8	E	Sw	5	2	17	9	241	4	190	412	0	0	0
141	1	Classroom (15)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
142	1	Classroom (14)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
143	1	Bathroom (14)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
144	1	Storage Room (14)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
145	1	Storage Room (14)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
146	1	Classroom (14)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
147	1	Classroom (16)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
148	1	Bathroom (16)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
149	1	Storage Room (16)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
150	1	Storage Room (16)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
151	1	Classroom (16)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
152	1	Classroom (18)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
153	1	Bathroom (18)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
154	1	Storage Room (18)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
155	1	Storage Room (18)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
156	1	Classroom (18)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
157	1	Classroom (20)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
158	1	Bathroom (20)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
159	1	Storage Room (20)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
160	1	Storage Room (20)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
161	1	Classroom (20)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
162	1	Classroom (13)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
163	1	Classroom (11)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
164	1	Janitor's Closet	Ceiling Suspended	E	4'T8	4	2	32	Sw	2	241	10	296	143	N/A	Ceiling Suspended	4'T8	E	Sw	4	2	32	2	241	10	296	143	0	0	0
165	1	Hallway	Recessed	E	2'T8	4	2	17	Sw	9	241	4	152	330	N/A	Recessed	2'T8	E	Sw	4	2	17	9	241	4	152	330	0	0	0
166	1	Conference Room	Ceiling Suspended	E	4'T8	6	2	32	Sw	8	241	10	444	856	C	Ceiling Suspended	4'T8	E	OS	6	2	32	6	241	10	444	642	0	214	214
167	1	Teachers Lounge	Ceiling Suspended	E	4'T8	10	2	32	Sw	8	241	10	740	1,427	C	Ceiling Suspended	4'T8	E	OS	10	2	32	6	241	10	740	1070	0	357	357
168	1	Bathroom	Vanity	E	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
169	1	Bathroom	Vanity	E	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Vanity	CFL	E	Sw	1	1	13	4	241	0	13	13	0	0	0
170	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	9	241	0	13	28	N/A	Recessed	CFL	E	Sw	1	1	13	9	241	0	13	28	0	0	0
171	1	Vestibule	Recessed	E	CFL	1	1	13	Sw	9	241	0	13	28	N/A	Recessed	CFL	E	Sw	1	1	13	9	241	0	13	28	0	0	0
172	1	Classroom (50)	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
173	1	Classroom (48)	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
174	1	Classroom (46)	Recessed	E	4'T8	3	4	32	Sw	8	241	20	444	856	N/A	Recessed	4'T8	E	Sw	3	4	32	8	241	20	444	856	0	0	0
175	1	Office (44)	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Ceiling Suspended	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
176	1	Office (42)	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Ceiling Suspended	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
177	1	Office (40)	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Ceiling Suspended	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
178	1	Office (38)	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Ceiling Suspended	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
179	1	Office (36)	Ceiling Suspended	E	4'T8	1	2	32	Sw	8	241	10	74	143	C	Ceiling Suspended	4'T8	E	OS	1	2	32	6	241	10	74	107	0	36	36
180	Ext	Exterior	Recessed	S	CFL	2	1	13	Sw	12	241	0	26	75	N/A	Recessed	CFL	S	Sw	2	1	13	12	241	0	26	75	0	0	0
181	Ext	Exterior	Wallpack	S	HPS	24	1	250	T	12	365	50	7,200	31,536		Wallpack	LED	S	T	24	1	78	12	365	8	2059	9019	22517	0	22517
182	Ext	Exterior	Wallpack	S	HPS	10	1	150	T	12	365	30	1,800	7,884		Wallpack	LED	S	T	10	1	30	12	365	3	330	1445	6439	0	6439
183	Ext	Exterior	Pole Mounted	S	HPS	8	1	400	PC	12	365	80	3,840	16,819		Pole Mounted	LED	S	PC	8	1	176	12	365	18	1549	6784	10035	0	10035
Totals:						**975**	**357**	**5,527**				**1,572**	**93,886**	**211,070**						**975**	**357**	**4,491**			**1,344**	**81,656**	**159,751**	**48,109**	**3,211**	**51,320**

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

Location			Existing Fixture Information												Retrofit Information													Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
1	1	Classroom (8)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
2	1	Bathroom (8)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
3	1	Storage Room (8)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
4	1	Storage Room (8)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
5	1	Classroom (8)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
6	1	Classroom (5)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
7	1	Bathroom (5)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
8	1	Storage Room (5)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
9	1	Storage Room (5)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
10	1	Classroom (5)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
11	1	Classroom (12)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
12	1	Bathroom (12)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
13	1	Storage Room (12)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
14	1	Storage Room (12)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
15	1	Classroom (12)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
16	1	Classroom (10)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
17	1	Bathroom (10)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
18	1	Storage Room (10)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
19	1	Storage Room (10)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
20	1	Classroom (10)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
21	1	Classroom (14)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
22	1	Bathroom (14)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
23	1	Storage Room (14)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
24	1	Storage Room (14)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
25	1	Classroom (14)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
26	1	Classroom (21)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
27	1	Bathroom (21)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
28	1	Storage Room (21)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
29	1	Storage Room (21)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
30	1	Classroom (21)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
31	1	Classroom (23)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
32	1	Bathroom (23)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
33	1	Storage Room (23)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
34	1	Storage Room (23)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
35	1	Classroom (23)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
36	1	Classroom (16)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
37	1	Bathroom (16)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
38	1	Storage Room (16)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
39	1	Storage Room (16)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
40	1	Classroom (16)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
41	1	Classroom (107)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
42	1	Bathroom (107)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
43	1	Storage Room (107)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
44	1	Storage Room (107)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
45	1	Classroom (107)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
46	1	Classroom (105)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
47	1	Bathroom (105)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
48	1	Storage Room (105)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
49	1	Storage Room (105)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
50	1	Classroom (105)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
51	1	Classroom (103)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
52	1	Bathroom (103)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
53	1	Storage Room (103)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
54	1	Storage Room (103)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
55	1	Classroom (103)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
56	1	Classroom (101)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
57	1	Bathroom (101)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
58	1	Storage Room (101)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
59	1	Storage Room (101)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
60	1	Classroom (101)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
61	1	Classroom (4)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
62	1	Classroom (6)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
63	1	Classroom (7)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
64	1	Classroom (9)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
65	1	Janitor's Closet	Ceiling Suspended	E	4'T8	2	4	32	Sw	2	241	20	296	143	N/A	Ceiling Suspended	4'T8	E	Sw	2	4	32	2	241	20	296	143	0	0	0
66	1	Janitor's Closet	Ceiling Mounted	E	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Mounted	CFL	E	Sw	1	1	13	8	241	0	13	25	0	0	0
67	1	Janitor's Closet	Ceiling Suspended	E	4'T8	2	4	32	Sw	2	241	20	296	143	N/A	Ceiling Suspended	4'T8	E	Sw	2	4	32	2	241	20	296	143	0	0	0
68	1	Janitor's Closet	Ceiling Mounted	E	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Mounted	CFL	E	Sw	1	1	13	8	241	0	13	25	0	0	0
69	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8 U-Shaped	E	OS	4	2	32	6	241	10	296	428	0	143	143
70	1	Bathroom Men	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	C	Recessed	CFL	S	OS	1	1	13	6	241	0	13	19	0	6	6
71	1	Bathroom Men	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
72	1	Bathroom Women	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	C	Recessed	4'T8	E	OS	2	4	32	6	241	20	296	428	0	143	143
73	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	4	2	32	Sw	8	241	10	296	571	C	Recessed	4'T8 U-Shaped	E	OS	4	2	32	6	241	10	296	428	0	143	143
74	1	Bathroom Women	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	C	Recessed	CFL	S	OS	1	1	13	6	241	0	13	19	0	6	6
75	1	Classroom (15)	Ceiling Suspended	E	4'T8	8	2	32	Sw	8	241	10	592	1,141	N/A	Ceiling Suspended	4'T8	E	Sw	8	2	32	8	241	10	592	1141	0	0	0
76	1	Bathroom	Recessed	E	4'T8	6	2	32	Sw	8	241	10	444	856	C	Recessed	4'T8	E	OS	6	2	32	6	241	10	444	642	0	214	214
77	1	Hallway	Recessed	E	4'T8	16	2	32	Sw	14	241	10	1,184	3,995	N/A	Recessed	4'T8	E	Sw	16	2	32	14	241	10	1184	3995	0	0	0
78	1	Speech Room	Ceiling Suspended	E	4'T8	8	4	32	Sw	8	241	20	1,184	2,283	C	Ceiling Suspended	4'T8	E	OS	8	4	32	6	241	20	1184	1712	0	571	571
79	1	Nurse's Station	Ceiling Suspended	E	4'T8	9	2	32	Sw	8	241	10	666	1,284	C	Ceiling Suspended	4'T8	E	OS	9	2	32	6	241	10	666	963	0	321	321
80	1	Nurse's Station	Ceiling Suspended	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Ceiling Suspended	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
81	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	C	Recessed	4'T8 U-Shaped	E	OS	2	2	32	6	241	10	148	214	0	71	71
82	1	Classroom (2)	Ceiling Suspended	E	4'T8	15	2	32	Sw	8	241	10	1,110	2,140	N/A	Ceiling Suspended	4'T8	E	Sw	15	2	32	8	241	10	1110	2140	0	0	0
83	1	Bathroom (2)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
84	1	Storage Room (2)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
85	1	Storage Room (2)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
86	1	Classroom (2)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
87	1	Classroom (1)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
88	1	Tech Office	Recessed	E	4'T8	15	4	32	Sw	8	241	20	2,220	4,280	N/A	Recessed	4'T8	E	Sw	15	4	32	8	241	20	2220	4280	0	0	0
89	1	Janitor's Closet	Ceiling Suspended	S	CFL	3	1	13	Sw	2	241	0	39	19	N/A	Ceiling Suspended	CFL	S	Sw	3	1	13	2	241	0	39	19	0	0	0
90	1	Classroom (17)	Ceiling Suspended	E	4'T8	17	2	32	Sw	8	241	10	1,258	2,425	N/A	Ceiling Suspended	4'T8	E	Sw	17	2	32	8	241	10	1258	2425	0	0	0
91	1	Bathroom (17)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
92	1	Storage Room (17)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
93	1	Storage Room (17)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
94	1	Classroom (17)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
95	1	Classroom (19)	Ceiling Suspended	E	4'T8	17	2	32	Sw	8	241	10	1,258	2,425	N/A	Ceiling Suspended	4'T8	E	Sw	17	2	32	8	241	10	1258	2425	0	0	0
96	1	Bathroom (19)	Recessed	S	CFL	1	1	13	Sw	4	241	0	13	13	N/A	Recessed	CFL	S	Sw	1	1	13	4	241	0	13	13	0	0	0
97	1	Storage Room (19)	Recessed	E	2'T8	1	2	17	Sw	2	241	4	38	18	N/A	Recessed	2'T8	E	Sw	1	2	17	2	241	4	38	18	0	0	0
98	1	Storage Room (19)	Recessed	S	CFL	1	1	13	Sw	2	241	0	13	6	N/A	Recessed	CFL	S	Sw	1	1	13	2	241	0	13	6	0	0	0
99	1	Classroom (19)	Recessed	S	CFL	1	1	13	Sw	8	241	0	13	25	N/A	Recessed	CFL	S	Sw	1	1	13	8	241	0	13	25	0	0	0
100	1	Classroom (18)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
101	1	Classroom (25)	Recessed	E	4'T8	16	4	32	Sw	8	241	20	2,368	4,566	N/A	Recessed	4'T8	E	Sw	16	4	32	8	241	20	2368	4566	0	0	0
102	1	Bathroom (25)	Recessed	E	4'T8 U-Shaped	14	2	32	Sw	8	241	10	1,036	1,997	N/A	Recessed	4'T8 U-Shaped	E	Sw	14	2	32	8	241	10	1036	1997	0	0	0
103	1	Storage Room (25)	Recessed	E	4'T8	4	4	32	Sw	2	241	20	592	285	N/A	Recessed	4'T8	E	Sw	4	4	32	2	241	20	592	285	0	0	0
104	1	Library	Ceiling Suspended	E	4'T8	38	4	32	Sw	8	241	20	5,624	10,843	N/A	Ceiling Suspended	4'T8	E	Sw	38	4	32	8	241	20	5624	10843	0	0	0
105	1	Bathroom Men	Recessed	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Recessed	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
106	1	Bathroom Men	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	C	Recessed	4'T8 U-Shaped	E	OS	2	2	32	6	241	10	148	214	0	71	71
107	1	Bathroom Women	Recessed	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	C	Recessed	4'T8	E	OS	4	4	32	6	241	20	592	856	0	285	285
108	1	Bathroom Women	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	8	241	10	148	285	C	Recessed	4'T8 U-Shaped	E	OS	2	2	32	6	241	10	148	214	0	71	71
109	1	Office	Recessed Parabolic	E	4'T8	10	2	32	Sw	9	241	10	740	1,605	N/A	Recessed Parabolic	4'T8	E	Sw	10	2	32	9	241	10	740	1605	0	0	0
110	1	Meeting Room	Recessed	E	4'T8	6	2	32	Sw	8	241	10	444	856	N/A	Recessed	4'T8	E	Sw	6	2	32	8	241	10	444	856	0	0	0
111	1	Office Area	Recessed	E	4'T8	1	4	32	Sw	9	241	20	148	321	N/A	Recessed	4'T8	E	Sw	1	4	32	9	241	20	148	321	0	0	0
112	1	Office Area	Recessed	E	4'T8	8	2	32	Sw	9	241	10	592	1,284	N/A	Recessed	4'T8	E	Sw	8	2	32	9	241	10	592	1284	0	0	0
113	1	Office Area	Recessed	E	4'T8	2	2	32	Sw	9	241	10	148	321	N/A	Recessed	4'T8	E	Sw	2	2	32	9	241	10	148	321	0	0	0
114	1	Office Area	Recessed	E	4'T8	2	2	32	Sw	9	241	10	148	321	N/A	Recessed	4'T8	E	Sw	2	2	32	9	241	10	148	321	0	0	0
115	1	Kitchen	Recessed Parabolic	S	CFL	16	1	13	Sw	8	241	0	208	401	N/A	Recessed Parabolic	CFL	S	Sw	16	1	13	8	241	0	208	401	0	0	0
116	1	Kitchen	Recessed	E	4'T8 U-Shaped	1	2	32	Sw	8	241	10	74	143	N/A	Recessed	4'T8 U-Shaped	E	Sw	1	2	32	8	241	10	74	143	0	0	0
117	1	Kitchen	Ceiling Mounted	E	4'T8	11	2	32	Sw	8	241	10	814	1,569	N/A	Ceiling Mounted	4'T8	E	Sw	11	2	32	8	241	10	814	1569	0	0	0
118	1	Kitchen	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	241	10	296	571	N/A	Ceiling Mounted	4'T8	E	Sw	4	2	32	8	241	10	296	571	0	0	0
119	1	Teachers Lounge	Ceiling Suspended	E	4'T8	10	2	32	Sw	14	241	10	740	2,497	C	Ceiling Suspended	4'T8	E	OS	10	2	32	11	241	10	740	1873	0	624	624
120	1	Vestibule	Ceiling Suspended	E	4'T8	2	2	32	Sw	14	241	10	148	499	N/A	Ceiling Suspended	4'T8	E	Sw	2	2	32	14	241	10	148	499	0	0	0

Location			Existing Fixture Information												Retrofit Information												Annual Savings		
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year	Category	Fixture Type	Lamp Type	Ballast	Controls	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Operational Hours per Day	Operational Days per Year	Ballast Watts	Total Watts	Energy Use kWh/year	Fixture Savings (kWh)	Controls Savings (kWh)	Total Savings (kWh)
121	1	Boiler Room	Ceiling Mounted	E	4'T8	10	2	32	Sw	2	365	10	740	540	N/A	Ceiling Mounted	4'T8	E	Sw	10	2	32	2	365	10	740	540	0	0	0
122	1	Boiler Room	Exit Sign	S	LED	1	1	25	N	14	365	3	28	141	LEDex	Exit Sign	LED	S	N	1	1	5	14	365	1	6	28	112	0	112
123	1	Recieving Room	Ceiling Suspended	E	4'T8	4	2	32	Sw	14	365	10	296	1,513	C	Ceiling Suspended	4'T8	E	OS	4	2	32	11	365	10	296	1134	0	378	378
124	1	Janitor's Closet	Ceiling Mounted	E	4'T8	1	2	32	Sw	2	241	10	74	36	N/A	Ceiling Mounted	4'T8	E	Sw	1	2	32	2	241	10	74	36	0	0	0
125	1	Cafeteria	Recessed	E	4'T8	24	6	32	Sw	8	241	30	5,328	10,272	N/A	Recessed	4'T8	E	Sw	24	6	32	8	241	30	5328	10272	0	0	0
126	1	Cafeteria	Recessed	S	Inc	11	1	75	Sw	8	241	0	825	1,591	CFL	Recessed	CFL	S	Sw	11	1	25	8	241	0	275	530	1060	0	1060
127	1	Cafeteria	Exit Sign	S	LED	3	1	25	N	24	365	3	83	723	LEDex	Exit Sign	LED	S	N	3	1	5	24	365	1	17	145	578	0	578
128	1	Backstage Area	Ceiling Suspended	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Ceiling Suspended	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
129	1	Backstage Area	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
130	1	Classroom (111)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
131	1	Classroom (104)	Recessed	E	4'T8	12	4	32	Sw	8	241	20	1,776	3,424	N/A	Recessed	4'T8	E	Sw	12	4	32	8	241	20	1776	3424	0	0	0
132	1	Classroom (20)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
133	1	Classroom (22)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
134	1	Classroom (24)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
135	1	Classroom (26)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
136	1	Classroom (28)	Recessed	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	N/A	Recessed	4'T8	E	Sw	4	4	32	8	241	20	592	1141	0	0	0
137	1	Classroom (30)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
138	1	Classroom (32)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
139	1	Classroom (34)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
140	1	Classroom (36)	Recessed	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	N/A	Recessed	4'T8	E	Sw	4	4	32	8	241	20	592	1141	0	0	0
141	1	Classroom (38)	Recessed	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	N/A	Recessed	4'T8	E	Sw	4	4	32	8	241	20	592	1141	0	0	0
142	1	Classroom (40)	Recessed	E	4'T8	2	4	32	Sw	8	241	20	296	571	N/A	Recessed	4'T8	E	Sw	2	4	32	8	241	20	296	571	0	0	0
143	1	Classroom (42)	Recessed	E	4'T8	4	4	32	Sw	8	241	20	592	1,141	N/A	Recessed	4'T8	E	Sw	4	4	32	8	241	20	592	1141	0	0	0
144	1	Hallway	Recessed	E	4'T8 U-Shaped	5	2	32	Sw	12	241	10	370	1,070	N/A	Recessed	4'T8 U-Shaped	E	Sw	5	2	32	12	241	10	370	1070	0	0	0
145	1	Hallway	Exit Sign	S	LED	3	1	25	N	24	365	3	83	723	LEDex	Exit Sign	LED	S	N	3	1	5	24	365	1	17	145	578	0	578
146	1	Hallway	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	12	241	10	148	428	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	12	241	10	148	428	0	0	0
147	1	Hallway	Recessed	E	4'T8 U-Shaped	5	2	32	Sw	12	241	10	370	1,070	N/A	Recessed	4'T8 U-Shaped	E	Sw	5	2	32	12	241	10	370	1070	0	0	0
148	1	Hallway	Recessed	E	4'T8 U-Shaped	12	2	32	Sw	12	241	10	888	2,568	N/A	Recessed	4'T8 U-Shaped	E	Sw	12	2	32	12	241	10	888	2568	0	0	0
149	1	Hallway	Exit Sign	S	LED	2	1	25	N	24	365	3	55	482	LEDex	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	385	0	385
150	1	Hallway	Recessed	E	4'T8 U-Shaped	12	2	32	Sw	12	241	10	888	2,568	N/A	Recessed	4'T8 U-Shaped	E	Sw	12	2	32	12	241	10	888	2568	0	0	0
151	1	Hallway	Exit Sign	S	LED	2	1	25	N	24	365	3	55	482	LEDex	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	385	0	385
152	1	Hallway	Recessed	E	4'T8 U-Shaped	2	2	32	Sw	12	241	10	148	428	N/A	Recessed	4'T8 U-Shaped	E	Sw	2	2	32	12	241	10	148	428	0	0	0
153	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
154	1	Hallway	Exit Sign	S	LED	2	1	25	N	24	365	3	55	482	LEDex	Exit Sign	LED	S	N	2	1	5	24	365	1	11	96	385	0	385
155	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	12	241	4	266	769	N/A	Recessed	2'T8	E	Sw	7	2	17	12	241	4	266	769	0	0	0
156	1	Hallway	Recessed	E	2'T8	7	2	17	Sw	12	241	4	266	769	N/A	Recessed	2'T8	E	Sw	7	2	17	12	241	4	266	769	0	0	0
157	1	Hallway	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241	LEDex	Exit Sign	LED	S	N	1	1	5	24	365	1	6	48	193	0	193
158	1	Hallway	Recessed	E	2'T8	2	2	17	Sw	12	241	4	76	220	N/A	Recessed	2'T8	E	Sw	2	2	17	12	241	4	76	220	0	0	0
159	1	Hallway	Recessed	E	2'T8	5	2	17	Sw	12	241	4	190	549	N/A	Recessed	2'T8	E	Sw	5	2	17	12	241	4	190	549	0	0	0
160	1	Hallway	Recessed	E	2'T8	4	2	17	Sw	12	241	4	152	440	N/A	Recessed	2'T8	E	Sw	4	2	17	12	241	4	152	440	0	0	0
161	1	Gymnasium	High Bay	S	MH	15	1	250	Sw	8	241	70	4,800	9,254	LED	High Bay	LED	S	Sw	15	1	150	8	241	0	2250	4338	4916	0	4916
162	Ext	Exterior	Wallpack	S	HPS	8	1	250	T	12	365	50	2,400	10,512		Wallpack	PSMH	S	T	8	1	78	12	365	0	624	2733	7779	0	7779
163	Ext	Exterior	Wallpack	S	HPS	10	1	150	T	12	365	30	1,800	7,884		Wallpack	PSMH	S	T	10	1	30	12	365	0	300	1314	6570	0	6570
164	Ext	Exterior	Pole Mounted	S	HPS	4	1	400	PC	12	365	80	1,920	8,410		Pole Mounted	PSMH	S	PC	4	1	176	12	365	0	704	3084	5326	0	5326
Totals:						**852**	**324**	**4,862**				**1,423**	**82,460**	**180,831**						**852**	**324**	**4,016**			**1,175**	**74,516**	**148,700**	**28,655**	**3,476**	**32,131**

Rows Highlighed Yellow Indicate an Energy Conservation Measure is recommended for that space

Appendix B: Lighting Study

Location			Existing Fixture Information											
Marker	Floor	Room Identification	Fixture Type	Ballast	Lamp Type	# of Fixtures	# of Lamps per Fixture	Watts per Lamp	Controls	Operational Hours per Day	Operational Days per Year	Ballast Wattage	Total Watts	Energy Use kWh/year
1	1	Hallway (HALL)	Recessed Parabolic	E	4'T8	10	2	32	Sw	9	208	5	690	1,292
2	1	Office (OFFICE)	Recessed Parabolic	E	4'T8	2	3	32	Sw	8	208	5	202	336
3	1	Nurse's Station (NURSE)	Recessed Parabolic	E	4'T8	6	2	32	Sw	7	208	5	414	603
4	1	Nurse's Station (NURSE)	Recessed Parabolic	E	4'T8	1	2	32	Sw	7	208	5	69	100
5	1	Office (OFFICE 2)	Recessed Parabolic	E	4'T8	10	2	32	Sw	8	208	5	690	1,148
6	1	Classroom (18)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
7	1	Bathroom (18)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
8	1	Classroom (19)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
9	1	Bathroom (19)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
10	1	Classroom (20)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
11	1	Bathroom (20)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
12	1	Classroom (21)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
13	1	Bathroom (21)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
14	1	Classroom (22)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
15	1	Bathroom (22)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
16	1	Classroom (23)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
17	1	Bathroom (23)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
18	1	Bathroom Men (BOYS)	Recessed Parabolic	E	4'T8	2	2	32	Sw	6	208	5	138	172
19	1	Bathroom Women (GIRLS)	Recessed Parabolic	E	4'T8	3	2	32	Sw	6	208	5	207	258
20	1	Storage Closet (STORAGE)	Recessed Parabolic	E	4'T8	1	2	32	Sw	2	208	5	69	29
21	1	Library (12)	Recessed Parabolic	E	4'T8	8	2	32	Sw	7	208	5	552	804
22	1	Storage Closet (12)	Recessed Parabolic	E	4'T8 U-Shaped	2	2	32	Sw	7	208	5	138	201
23	1	Classroom (14)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
24	1	Bathroom (14)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
25	1	Classroom (15)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
26	1	Bathroom (15)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
27	1	Classroom (16)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
28	1	Bathroom (16)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
29	1	Classroom (17)	Recessed Parabolic	E	4'T8	8	2	32	Sw	6	208	5	552	689
30	1	Bathroom (17)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
31	1	Hallway (NEW HALL)	Recessed Parabolic	E	4'T8	30	1	32	Sw	9	208	5	1,110	2,078
32	1	Classroom (24)	Recessed Parabolic	E	4'T8	13	3	32	Sw	6	208	5	1,313	1,639
33	1	Bathroom (24)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
34	1	Classroom (24)	Recessed Parabolic	E	2'T8	1	2	17	Sw	6	208	2	36	45
35	1	Classroom (25)	Recessed Parabolic	E	4'T8	13	3	32	Sw	6	208	5	1,313	1,639
36	1	Bathroom (25)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
37	1	Classroom (25)	Recessed Parabolic	E	2'T8	1	2	17	Sw	6	208	2	36	45
38	1	Classroom (26)	Recessed Parabolic	E	4'T8	13	3	32	Sw	6	208	5	1,313	1,639
39	1	Bathroom (26)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
40	1	Classroom (26)	Recessed Parabolic	E	2'T8	1	2	17	Sw	6	208	2	36	45
41	1	Classroom (27)	Recessed Parabolic	E	4'T8	13	3	32	Sw	6	208	5	1,313	1,639
42	1	Bathroom (27)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
43	1	Classroom (27)	Recessed Parabolic	E	2'T8	1	2	17	Sw	6	208	2	36	45
44	1	Classroom (28)	Recessed Parabolic	E	4'T8	13	3	32	Sw	6	208	5	1,313	1,639
45	1	Bathroom (28)	Recessed Parabolic	S	Inc	1	1	60	Sw	4	208	0	60	50
46	1	Classroom (28)	Recessed Parabolic	E	2'T8	1	2	17	Sw	6	208	2	36	45
47	1	Electrical Rm (ELEC)	Parabolic Ceiling Suspended	E	4'T8	2	2	32	Sw	2	208	5	138	57
48	1	Lunch Rm (30)	Recessed Parabolic	E	4'T8	4	3	32	Sw	6	208	5	404	504
49	1	Office Area (29)	Recessed Parabolic	E	4'T8	4	3	32	Sw	8	208	5	404	672
50	1	Exterior (EXT)	Wallpack	S	HPS	20	1	70	PC	12	365	14	1,680	7,358
51	1	Multi-Purpose	Ceiling Mounted	E	8'T8	8	2	59	Sw	6	208	7	1,000	1,248
52	1	Multi-Purpose	Exit Sign	S	LED	1	1	25	N	24	365	3	28	241
53	1	Office Area	Exit Sign	S	LED	1	1	5	N	24	365	1	6	48
54	1	Office Area	Ceiling Mounted	E	4'T8	4	2	32	Sw	8	261	5	276	576
55	1	Storage Rm	Ceiling Mounted	E	4'T8	4	2	32	Sw	2	261	5	276	144
56	2	Hallway	Ceiling Mounted	E	4'T8	5	2	32	Sw	11	261	5	345	990
57	2	Hallway	Exit Sign	S	LED	2	1	5	N	24	365	1	11	96
58	Attic	Attic	Ceiling Mounted	S	Inc	2	1	60	Sw	1	50	0	120	6
59	2	Classroom	Ceiling Suspended	E	4'T8	12	2	32	Sw	6	208	5	828	1,033
60	2	Classroom	Ceiling Suspended	E	4'T8	12	2	32	Sw	6	208	5	828	1,033
61	2	Classroom	Ceiling Suspended	E	4'T8	12	2	32	Sw	6	208	5	828	1,033
62	2	Classroom	Ceiling Suspended	E	4'T8	12	2	32	Sw	6	208	5	828	1,033
63	2	Classroom	Ceiling Suspended	E	4'T8	12	2	32	Sw	6	208	5	828	1,033
64	2	Classroom	Ceiling Suspended	E	4'T8	12	2	32	Sw	6	208	5	828	1,033
65	Str	Staircase	Wall Mounted	E	4'T8	3	2	32	Sw	9	208	5	207	388
66	Str	Staircase	Wall Mounted	E	4'T8	3	2	32	Sw	9	208	5	207	388
67	1	Vestibule	Ceiling Suspended	S	CFL	1	1	13	Sw	9	208	0	13	24
68	1	Vestibule	Ceiling Suspended	S	CFL	1	1	13	Sw	9	208	0	13	24
69	1	Vestibule	Exit Sign	S	LED	1	1	25	N	24	208	3	28	137
70	1	Vestibule	Exit Sign	S	LED	1	1	25	N	24	208	3	28	137
71	1	Storage Rm	Ceiling Mounted	E	4'T8	2	2	32	Sw	4	100	5	138	55
72	1	Bathroom	Ceiling Mounted	E	4'T8	1	2	32	Sw	4	208	5	69	57
73	1	Bathroom	Ceiling Mounted	E	4'T8	1	2	32	Sw	4	208	5	69	57
74	1	Faculty Lounge	Ceiling Suspended	E	4'T8	5	2	32	Sw	8	208	5	345	574
75	1	Boiler Rm	Ceiling Mounted	E	4'T8	4	2	32	Sw	4	208	5	276	230
76	1	Storage Rm	Ceiling Mounted	E	4'T8	1	2	32	Sw	1	100	5	69	7
77	2	Bathroom Men	Ceiling Mounted	E	4'T8	2	2	32	Sw	4	208	5	138	115
78	2	Bathroom Women	Ceiling Mounted	E	4'T8	2	2	32	Sw	4	208	5	138	115
Totals:						397	139	2,821				280	28,836	43,528