NORESCO

Energy Performance Contracting Project

Energy Audit Report

Northeastern Illinois University

March 4, 2010

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EXECUTIVE SUMMARY

NORESCO is pleased to present to Northeastern Illinois University this Detailed Energy Audit. As a result of the audit numerous Energy Conservation Measures (ECMs) will be presented that will fund improvements at NEIU through reductions in operational expenses. These improvements include HVAC upgrades, lighting retrofits, water conservation measures, upgraded control systems, solar heating solutions etc.

The goals of this Energy Performance Contracting project as clearly stated by NEIU are to identify and implement facility improvements that:

- Obtain consistent levels of comfort and safety
- Reduce energy consumption and costs
- Contribute to a more sustainable and "Green" campus
- Enhance the operability of the facilities
- Incur no capital upfront costs
- Self fund within a 20 year term including debt service
- Provide guaranteed energy savings proven through a comprehensive Measurement and Verification Process

Energy Conservation Measures

NORESCO has investigated dozens of viable ECMs within the NEIU campus. For illustration purposes one comprehensive scenario was developed that totals over $7.4 mil worth of improvements that self funds in under 20 years considering a 5% interest rate and a 3.5% utility escalation factor. The table on the following page represents the comprehensive list of ECMs and their associated costs and savings. The final project scope will be determined by NEIU. Primarily for demonstration purposes both a 20 year and a 16 year program is illustrated within the Financial Analysis section of this document. As previously discussed, the actual cost of each ECM may vary based on the final project scope.

The following is a brief description of the ECMs that were evaluated. A more detailed description of each ECM is illustrated in the "Energy Conservations Measures" section of this document.

Northeastern Illinois University
20 Year Term

ECM	Price	Savings	Simple Payback	Annual M&V	Electricity kW	Electricity kWh	Natural Gas Therms	Water Kgal	Sewer Kgal
HTHW System Efficiency Improvements									
HTHW Boiler New Controls	$ 101,595	$ 21,033	4.8 Yrs	$ 785	0	0	29,031	0	0
HTHW Pipe Insulation	$ 71,280	$ 7,694	9.3 Yrs	$ 288	0	0	10,620	0	0
Chiller Plant System Improvements									
New CW Pumps & Filtration System	$ 306,270	$ -	--	$ -	0	0	0	0	0
Lighting Efficiency Upgrades	$ 1,640,293	$ 145,485	11.3 Yrs	$ 4,848	5,343	1,555,317	(18,321)	0	0
Water Efficiency Upgrades	$ 482,474	$ 30,826	15.7 Yrs	$ 1,076	0	0	606	8,365	8,365
Control System Upgrades - INET	$ 2,281,144	$ 164,576	13.9 Yrs	$ 5,951	217	1,305,910	87,752	0	0
HVAC System Efficiency Improvements									
D-1 Unit HW Coil & VFD	$ 95,599	$ 8,536	11.2 Yrs	$ 319	85	68,233	4,291	0	0
VAV at LWH (VFD Only)	$ 129,183	$ 23,715	5.4 Yrs	$ 885	633	244,515	3,309	0	0
VAV at Library	$ 619,833	$ 54,685	11.3 Yrs	$ 2,041	1,449	596,198	4,475	0	0
Pool Pump VFD	$ 46,167	$ 7,592	6.1 Yrs	$ 284	130	94,570	0	0	0
Kitchen Hood Controls	$ 60,798	$ 7,919	7.7 Yrs	$ 295	0	57,237	5,207	0	0
HVAC System Infrastructure Upgrades (New Equip)									
New Induction Units at LWH	$ 923,967	$ -	--	$ -	0	0	0	0	0
New HW H/EX at Science	$ 74,372	$ -	--	$ -	0	0	0	0	0
Renewable Initiatives	$ 264,893	$ 1,851	143.1 Yrs	$ 69	(7)	(5,200)	3,131	0	0
CCICS Efficiency and Infrastructure Upgrades									
New Heating Boilers	$ 353,236	$ 4,380	80.6 Yrs	$ 164	0	0	6,046	0	0
TOTAL	**$ 7,451,100**	**$ 478,292**	**15.6 Years**	**$ 17,005**	**7,850**	**3,916,780**	**136,147**	**8,365**	**8,365**

Lighting

The lighting throughout the campus is mostly 32 Watt lamps. NORESCO proposes to upgrade the majority of the lighting with 28 Watt lamps. We also propose to strategically install lighting controls in certain areas to take advantage of daylight. This measure will ensure appropriate light levels to enhance the learning environment while significantly reducing energy costs.

Water Efficiency

NORESCO is proposing to replace and upgrade plumbing fixtures throughout the facility to an Ultra Low Flow, automatic flush variety to reduce water usage and costs.

Building Automation Controls

Currently NEIU has numerous control systems installed throughout the campus. NORESCO proposes to consolidate these systems by installing and expanding the current i-Net Seven controls system. This will significantly reduce energy through improved control sequences and will greatly enhance operability and decision making through beter data collection. Also the new system will be designed as a "backbone" to provide future renovation projects a cost effective means of connecting to the more versitile system.

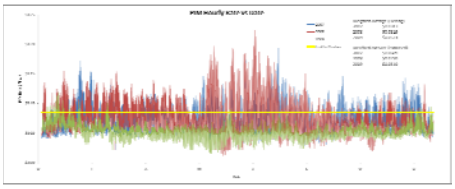
HTHW System Efficiency Improvements

NORESCO evaluated a measure to optimize boiler efficiency with tighter combustions controls. This measure will reduce energy and improve controls for this system.



Co-Gen System Optimization

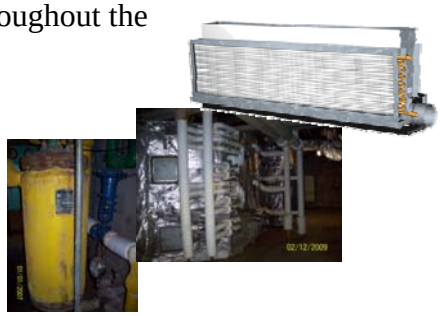
NORESCO evaluated a measure to install heat recovery on the generators and increase their run hours to create savings by changing fuel sources and capturing excess heat. An extensive utility analysis was completed and although this option could be viable in the future, more information is needed about proposed PJM changes.



Chiller Plant System Improvements

NORESCO investigated the application of installing a Variable Frequency Drive on one chiller and upgrading the condenser water pumps including a filtration system.

HVAC Systems



Modernization and replacement of various HVAC systems throughout the campus were evaluated including:

- Induction Units in LWH
- Air handling Units in Building E
- VAV Conversion in the library and LWH
- New Heat Exchanger in Science Building
- Kitchen Hood Controls
- AHU D1 Hot Water / Chilled Water Single Control
- Pool Pump Controls

Improvements to these systems will help reduce operational costs and greatly enhance comfort, safety, operability and maintenance of these areas.

Renewables

NORESCO evaluated a solar hot water heating system to take advantage of clean renewable energy. This measure will also take advantage of Illinois Department of Commerce and Economic Development grant initiatives and provide a local case study for any of the on campus "Green" committees.

Windows

The window system that was evaluated during the audit encapsulates building hallways and corridors connecting buildings, A through F and the Student Union. Although the new window system will greatly enhance the aesthetics of the environment while reducing energy costs the cost vs. savings analysis make this measure more capitally intensive.

CCICS Improvements

The Center for Inner City Studies facility was evaluated for improvements and savings for the:

- Boilers
- Controls
- Lighting
- Domestic Water Pumps

The improvements will not only save energy and operational costs but it will also enhance the safety and comfort of the learning environment. Many of the upgrades described herein for this facility are considered to be capital intensive as their payback exceeds the maximum term allowed.

Implementation, Maintenance and Training

The project illustrated herein contemplates a 13 month installation period. The estimated start date is June 11, 2010 which is the day following NEIU's June board meeting. This plan can be adjusted forward or backward depending on the actual contract execution determined by NEIU. Moving the schedule significantly could have an adverse impact on labor costs and seasonal considerations so NORESCO proposes to work closely with NEIU to help determine the most appropriate execution date. A detailed implementation plan is detailed in the "Project Implementation Plan" of this document. NEIU is experienced in maintaining their facility and/or hiring the appropriate 3rd party maintenance contractors. For this reason, NORESCO proposes to train current staff on the proper maintenance and

operation of appropriate new measures to allow them to properly maintain these systems. A detail of the proposed training is outlined per ECM in each of the individual ECM write ups within this document.

Environmental Impact

Northeastern Illinois University

Energy Savings

Energy Source	Energy Units	Option 20 Year Term
Electricity	kWh	3,916,780
Natural Gas	Therms	136,147
Water	Kgal	8,365
Sewer	Kgal	8,365

Emissions Reductions

Emission Type	Emissions Units	Option 20 Year Term
CO2	Lbs	5,985,541
NOx	Lbs	19,325.9
SOx	Lbs	12,685.8

Equivalent Number of Acres of Trees Planted 	**1,022 Acres**
Equivalent Number of Cars Removed from the Roads 	**824 Cars**

Conversion Data Obtained from

Electricity: http://www.eia.doe.gov/oiaf/1605/e-factor.html
Fossil Fuels: http://www.eia.doe.gov/oiaf/1605/factors.html

Summary

This Executive Summary provides only a highlight of what has been evaluated for NEIU for the purposes of a guaranteed energy performance contracting. After many discussions, walkthroughs and analyses we at NORESCO are confident we have satisfied the requirements set forth by NEIU to uncover a comprehensive energy conservation program that not only saves energy and makes the NEIU campus more sustainable for years to come but also greatly enhances the learning environment and is completely funded within existing budgets without assistance from the State. All of us here at our local NORESCO Chicago office would like thank the staff at NEIU who spent a great deal of time helping to collaboratively develop this audit with all of us and we very much look forward to working together to determine the final scope of services and begin implementing the program.

Northeastern Illinois University
EQUIPMENT LIST

Air Handling Units															
Northeastern Illinois University	Service	Location	Size (CFM)	Supply Fan Static Pressure	Measured variable	Measured CFM	Measured Static	Measured Power (kW)	Efficiency	Hours of Operation	Source (Logger /Staff)	Operating Condition (Model Yr)	Median Service Life [1] (Years)	Remaining Useful Life (Years)
E1	Building -E	Building -E	3,820	3	Fan power	N/A	N/A	N/A	N/A	2,413	Staff	1975	25	-10
E6	Building -E	Building -E	7,300	3	Fan power	N/A	N/A	N/A	N/A	1,378	Staff	1975	25	-10
E7	Building -E	Building -E	1,760	1	Fan power	N/A	N/A	N/A	N/A	673	Staff	1975	25	-10
E4	Building -E	Building -E	31,400	20	Fan power	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E5	Building -E	Building -E	10,205	15	Fan power	N/A	N/A	N/A	N/A	1,547	Staff	1975	25	-10
E2	Building -E	Building -E	21,995	15	N/A	N/A	N/A	N/A	N/A	4,209	Staff	1975	25	-10
E9	Building -E	Building -E	2,445	2	N/A	N/A	N/A	N/A	N/A	1,500	Staff	1975	25	-10
E5	Building -E	Building -E	10,700	Not Listed	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E3	Building -E	Building -E	14,480	10	N/A	N/A	N/A	N/A	N/A	2,130	Staff	1975	25	-10
E10	Building -E	Building -E	3,620	1.5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E11	Building -E	Building -E	14,600	7.5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E12	Building -E	Building -E	17,275	5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E13	Building -E	Building -E	9,790	5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E14	Building -E	Building -E	13,400	5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E15	Building -E	Building -E	620	0.75	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
E23	Building -E	Building -E	9,795	5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1975	25	-10
S1	1st Floor	Science Building	37,800	5.25	N/A	50,910	2.76	N/A	N/A	2,464 *	N/A	1970	25	-15
S2	2nd West	Science Building	29,800	4.5	N/A	26,840	3.95	N/A	N/A	2,464 *	N/A	1970	25	-15
S3	2nd East	Science Building	20,000	4.5	N/A	Not Listed	Not Listed	N/A	N/A	2,464 *	N/A	1970	25	-15
S4	3rd West	Science Building	31,400	4.5	Fan power	32,866	3.59	22.22	N/A	2,464 *	N/A	1970	25	-15
S5	3rd East	Science Building	22,500	4.5	N/A	Not Listed	Not Listed	N/A	N/A	2,464 *	N/A	1970	25	-15
S6	Greenhouse	Science Building	11,700	0.2	N/A	Not Listed	Not Listed	N/A	N/A	2,464 *	N/A	1970	25	-15
VS-1	Not Listed	Classroom Building	23,130	3.5	N/A	26,100	1.83	N/A	N/A	2,464 *	N/A	1970	25	-15
VS-2	Not Listed	Classroom Building	24,380	3.5	N/A	20,460	2.08	N/A	N/A	2,464 *	N/A	1970	25	-15
VS-3	Not Listed	Classroom Building	31,800	3.5	N/A	28,150	2.30	N/A	N/A	2,464 *	N/A	1970	25	-15
VS-4	Not Listed	Classroom Building	30,200	3.5	N/A	43,380	2.22	N/A	N/A	2,464 *	N/A	1970	25	-15
VS-5	Not Listed	Classroom Building	16,300	0.9	Fan power	18,160	1.11	21.5	N/A	2,464 *	N/A	1970	25	-15
VS-6	Not Listed	Classroom Building	8,325	2.5	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1970	25	-15
VS-7	Not Listed	Classroom Building	4,000	0.625	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1970	25	-15
AHU-1	Not Listed	Fine Arts	20,000	4.6	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-2	Not Listed	Fine Arts	14,500	5.5	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-3	Not Listed	Fine Arts	40,000	5.1	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-4	Not Listed	Fine Arts	36,000	5.2	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-5	Not Listed	Fine Arts	2,500	2	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-6	Not Listed	Fine Arts	4,700	2.1	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-7	Not Listed	Fine Arts	2,100	1.54	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-8	Not Listed	Fine Arts	4,100	2.55	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-9	Not Listed	Fine Arts	1,850	1.5	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-10	Not Listed	Fine Arts	2,500	1.88	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-11	Not Listed	Fine Arts	4,300	2.57	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-12	Not Listed	Fine Arts	3,900	2.7	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-13	Not Listed	Fine Arts	4,300	2.78	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-14	Not Listed	Fine Arts	5,000	2.28	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-15	Not Listed	Fine Arts	2,000	2.21	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-16	Not Listed	Fine Arts	4,300	2.2	N/A	N/A	N/A	N/A	N/A	1,537	Staff	1996	25	11
AHU-17	Not Listed	Fine Arts	2,200	2.23	N/A	N/A	N/A	N/A	N/A	0	Staff	1996	25	11
S1	Mech Rm LL / Floors 2&3	Library	Not Listed	3	Fan power	59,000	1.36	31.25	N/A	3,604	Staff	1978	25	-7
S2	Mech Rm LL / Floors 1 thru 4	Library	Not Listed	3	N/A	46,270	2.41	N/A	N/A	3,604	Staff	1978	25	-7
S3	Mech Rm LL / Floors 1 thru 4	Library	Not Listed	3	N/A	42,412	1.10	N/A	N/A	3,604	Staff	1978	25	-7
S4	Mech Rm PH / Floors 1 thru 4	Library	Not Listed	3	N/A	N/A	N/A	N/A	N/A	3,604	Staff	1978	25	-7
S5	Mech Rm PH / Floors 1 thru 4	Library	Not Listed	3	N/A	N/A	N/A	N/A	N/A	3,604	Staff	1978	25	-7
D-1	Not Listed	Building-D	43,000	Not Listed	N/A	N/A	N/A	N/A	N/A	3,948	Staff	1993	25	8
H-1	Not Listed	Building-D	Not Listed	Not Listed	N/A	N/A	N/A	N/A	N/A	4,081	Staff	1993	25	8
D-3	Not Listed	Building-D	Not Listed	Not Listed	N/A	N/A	N/A	N/A	N/A	4,081	Staff	1993	25	8
AHU-1	Not Listed	Administration Building	38,000	1.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	N/A
AHU-1	Lower Level Rm 019	Student Union	Not Listed	Not Listed	Fan power	23,910	3.54	18.4	N/A	5,936	Staff	1997	25	12
AHU-2	1st FL Rm 114	Student Union	Not Listed	Not Listed	N/A	23,650	3.00	N/A	N/A	5,936	Staff	1997	25	12
AHU-3	2nd FL Rm 220	Student Union	Not Listed	Not Listed	N/A	N/A	N/A	N/A	N/A	5,936	Staff	1997	25	12
AHU-4	2nd FL Rm 203	Student Union	Not Listed	Not Listed	N/A	N/A	N/A	N/A	N/A	5,936	Staff	1997	25	12
AHU-5	1st FL Rm 102	Student Union	Not Listed	Not Listed	N/A	9,331	0.65	N/A	N/A	5,936	Staff	1997	25	12
AHU-6	2nd FL Rm 212	Student Union	Not Listed	Not Listed	N/A	N/A	N/A	N/A	N/A	2,464 *	N/A	1997	25	12
S-1	Basement and 1st FL	CCICS	16,140	2.5	N/A	N/A	N/A	N/A	N/A	5,436	Staff	1976	25	-9
S-2	2nd FL and 3rd FL	CCICS	12,595	2.5	N/A	N/A	N/A	N/A	N/A	5,436	Staff	1976	25	-9
S-3	Auditorium	CCICS	8,400	2	N/A	N/A	N/A	N/A	N/A	5,436	Staff	1976	25	-9
S-4	4th, 5th, and 6th Floors	CCICS	46,950	2.25	N/A	N/A	N/A	N/A	N/A	5,436	Staff	1976	25	-9
S-5	Projection Room	CCICS	920	0.5	N/A	N/A	N/A	N/A	N/A	5,436	Staff	1976	25	-9
S-6	Combustion Air	CCICS	3,200	0.5	N/A	N/A	N/A	N/A	N/A	5,436	Staff	1976	25	-9
S-1	Not Listed	PE Complex	13,235	6.5 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-2	Not Listed	PE Complex	3,840	5.5 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-3	Not Listed	PE Complex	15,240	5.0 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-4	Not Listed	PE Complex	16,220	5.5 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-5	Not Listed	PE Complex	18,000	5.0 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-6	Not Listed	PE Complex	12,000	5.0 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-7	Not Listed	PE Complex	Not Listed	Not Listed	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4
S-8	Not Listed	PE Complex	7,180	3.96 WC	N/A	N/A	N/A	N/A	N/A	5,787	Staff	1989	25	4

Exhaust / Return Fans														
ID	Service	Location	Size (CFM)	SP	Measured variable	Measured CFM	Measured Static	Measured Power (kW)	Efficiency	Hours of Operation	Source (Logger /Staff)	Operating Condition (Model Yr)	Median Service Life[1] (Years)	Remaining Useful Life (Years)
FHE-1	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-2	Laboratory Exhaust fans	Science Building	1,680	2.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-3	Laboratory Exhaust fans	Science Building	790	2.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-4	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-5	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-6	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-7	Laboratory Exhaust fans	Science Building	1,580	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-8	Laboratory Exhaust fans	Science Building	600	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-9	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-10	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-11	Laboratory Exhaust fans	Science Building	1,580	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-12	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-13	Laboratory Exhaust fans	Science Building	1,580	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-14	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-15	Laboratory Exhaust fans	Science Building	790	1.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-16	Laboratory Exhaust fans	Science Building	3,160	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-17	Laboratory Exhaust fans	Science Building	790	0.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-18	Laboratory Exhaust fans	Science Building	4,440	1.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-19	Laboratory Exhaust fans	Science Building	1,680	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-20	Laboratory Exhaust fans	Science Building	580	1.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-21	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-22	Laboratory Exhaust fans	Science Building	620	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-23	Laboratory Exhaust fans	Science Building	790	1.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-24	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-25	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-26	Laboratory Exhaust fans	Science Building	790	1.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-27	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-28	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-29	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-30	Laboratory Exhaust fans	Science Building	580	1.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-31	Laboratory Exhaust fans	Science Building	500	1.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-32	Laboratory Exhaust fans	Science Building	790	1.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-33	Laboratory Exhaust fans	Science Building	1,580	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-34	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-35	Laboratory Exhaust fans	Science Building	790	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-36	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-37	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-38	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
FHE-39	Laboratory Exhaust fans	Science Building	790	1.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
RA-1	Not Listed	Science Building	22,355	2	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
RA-3	Not Listed	Science Building	15,390	1.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-1	Not Listed	Science Building	12,710	2.25	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-2	Not Listed	Science Building	29,580	2.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-3	Not Listed	Science Building	3,000	1.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-4	Not Listed	Science Building	22,000	0.375	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-5	Not Listed	Science Building	14,000	0.375	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-6	Not Listed	Science Building	1,200	1.4	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-7	Not Listed	Science Building	1,400	0.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-8	Not Listed	Science Building	420	0.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
VE-1	Exterior West	Classroom Building 4 th Floor	21,180	1	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
VE-2	Exterior East	Classroom Building 4 th Floor	23,380	1	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
VE-3	Interior West	Classroom Building 4 th Floor	26,460	1	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
VE-4	Interior East	Classroom Building 4 th Floor	25,400	1	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
VE-5	Induction system	Classroom Building 4 th Floor	15,630	1	Fan power	N/A	N/A	4.3	N/A	2,464 *	NA	1970	25	-15
VE-6	Kitchen	Classroom Building 4 th Floor	3,180	1.5	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-1	West toilets	Classroom Building	4,800	0.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E-2	East toilets	Classroom Building	4,800	0.75	N/A	N/A	N/A	N/A	N/A	2,464 *	NA	1970	25	-15
E/R1	Not Listed	Fine Arts	18,000	2.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
E/R2	Not Listed	Fine Arts	12,900	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
E/R3	Not Listed	Fine Arts	36,500	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
E/R4	Not Listed	Fine Arts	32,400	2.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-1	Not Listed	Fine Arts	2,100	1.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-2	Not Listed	Fine Arts	5,000	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-3	Not Listed	Fine Arts	4,800	2.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-4	Not Listed	Fine Arts	11,400	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-5	Not Listed	Fine Arts	4,100	2.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-6	Not Listed	Fine Arts	2,100	1.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-7	Not Listed	Fine Arts	2,500	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-8	Not Listed	Fine Arts	2,500	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-9	Not Listed	Fine Arts	4,700	2	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-10	Not Listed	Fine Arts	2,000	1.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-11	Not Listed	Fine Arts	2,100	1.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-12	Not Listed	Fine Arts	300	0.375	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-13	Not Listed	Fine Arts	3,900	3	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-14	Not Listed	Fine Arts	1,600	1.75	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-15	Not Listed	Fine Arts	3,500	1	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-16	Not Listed	Fine Arts	1,600	0.25	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
TE-1	Not Listed	Fine Arts	3,290	1	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
TE-2	Not Listed	Fine Arts	1,845	0.75	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
TE-3	Not Listed	Fine Arts	1,240	1	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
EF-17	Not Listed	Fine Arts	1,600	0.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11

TE-4	Not Listed	Fine Arts	1,760	0.5	N/A	N/A	N/A	N/A	N/A	1,537 *	NA	1996	25	11
E-1	Not Listed	Library	45,000	1	Fan power	N/A	N/A	8.15	N/A	3,604 *	NA	1978	25	-7
E-2	Not Listed	Library	43,120	1	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-3	Not Listed	Library	30,070	1	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-4	Not Listed	Library	17,170	1	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-5	Not Listed	Library	24,330	1	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-6	Not Listed	Library	4,600	0.5	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-7	Not Listed	Library	8,640	0.25	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-8	Not Listed	Library	410	0.5	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-9	Not Listed	Library	13,500	0.25	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-10	Not Listed	Library	1,400	0.5	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-11	Not Listed	Library	2,140	0.25	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-12	Not Listed	Library	1,000	0.375	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
RF-1	Basement	Library	38,000	1.25	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
EF-1	Toilets and Janitor closets	Library	2,900	1	N/A	N/A	N/A	N/A	N/A	3,604 *	NA	1978	25	-7
E-1	Basement and 1st FL	CCICS	12,250	0.75	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-2	2nd FL and 3rd FL	CCICS	10,095	0.75	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-3	Auditorium Exhaust	CCICS	8,400	0.375	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-4	4th, 5th, and 6th Floors	CCICS	38,795	0.75	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-5	Toilet Exhaust	CCICS	5,040	0.75	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-6	Projection Room Exhaust	CCICS	920	0.5	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-7	Kitchen Exhaust	CCICS	840	0.5	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
E-8	Warming Kitchen Exhaust	CCICS	530	0.25	NA	NA	NA	NA	N/A	5,436	Staff	1976	25	-9
EF-1	PE Complex	Roof Mounted	1,160	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-2	PE Complex	Roof Mounted	225	0.6	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-3	PE Complex	Roof Mounted	260	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-4	PE Complex	Roof Mounted	690	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-5	PE Complex	Roof Mounted	80	0.2	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-6	PE Complex	Roof Mounted	75	0.2	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-7	PE Complex	Roof Mounted	80	0.2	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-8	PE Complex	Roof Mounted	10,445	1.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-9	PE Complex	Roof Mounted	160	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-10	PE Complex	Roof Mounted	1,130	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-11	PE Complex	Roof Mounted	165	0.62	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-12	PE Complex	Roof Mounted	165	0.62	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-13	PE Complex	Roof Mounted	250	0.1	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-14	PE Complex	Roof Mounted	25,000	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-15	PE Complex	Roof Mounted	25,000	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-16	PE Complex	Roof Mounted	25,000	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-17	PE Complex	Roof Mounted	25,000	0.5	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
EF-18	PE Complex	Wall mounted	4,700	0.25	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
RA-1	PE Complex	Not Listed	11,920	3 WC	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
RA-2	PE Complex	Not Listed	3,840	1.5WC	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
RA-3	PE Complex	Not Listed	7,200	1.43 WC	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
RA-4	PE Complex	Not Listed	16,220	1.5WC	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
RA-5	PE Complex	Not Listed	18,000	1.5WC	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4
RA-6	PE Complex	Not Listed	12,000	1.5WC	NA	NA	NA	NA	N/A	5,787*	NA	1989	25	4

* Estimated using operating hours of similar zones and similar AHUs

Northeastern Illinois University
EQUIPMENT LIST

Pumps														
ID	Service	Location	GPM	Suction Head	TDH Feet	HP	Measured variable	Measured value (kW)	Efficiency	Hours of Operation	Source (Logger /Staff)	Operating Condition (Model Yr)	Median Service Life [1] (Years)	Remaining Useful Life (Years)
P-1	Chilled Water	Science Building	415	Not Listed	55	10.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-2	Radiation	Science Building	120	Not Listed	90	5.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-3	Re-Heat Coils	Science Building	80	Not Listed	65	3.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-4	S-1HC	Science Building	41	Not Listed	20	0.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-5	S2HC	Science Building	110	Not Listed	45	3.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-6	S-3HC	Science Building	10	Not Listed	20	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-7	S-4HC	Science Building	77	Not Listed	35	1.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-8	S-5HC	Science Building	55	Not Listed	25	1.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-9	S1-CWRC	Science Building	55	Not Listed	12	1.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-10	S2-CWRC	Science Building	50	Not Listed	15	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-11	S-3CWRC	Science Building	32	Not Listed	10	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-12	S-4CWRC	Science Building	50	Not Listed	10	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-13	S-5CWRC	Science Building	40	Not Listed	10	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-14	S-6HC	Science Building	10	Not Listed	30	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-15	S-6HC	Science Building	132	Not Listed	60	5.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-1	Primary heating	Classroom Building	Not Listed	Not Listed	65	10.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-2	Primary heating	Classroom Building	Not Listed	Not Listed	65	10.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-3	Primary chilled water	Classroom Building	Not Listed	Not Listed	50	7.5	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-4	Primary chilled water	Classroom Building	Not Listed	Not Listed	50	7.5	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-5	Induction system	Classroom Building	Not Listed	Not Listed	110	10.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-6	Induction system	Classroom Building	Not Listed	Not Listed	110	10.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-7	Radiation circulating	Classroom Building	Not Listed	Not Listed	40	2.0	N/A	N/A	68% **	Not Listed	N/A	1970	20	1990
P-8	VS-1 Heating Coil	Classroom Building	Not Listed	Not Listed	20	0.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-9	VS-2 Heating Coil	Classroom Building	Not Listed	Not Listed	20	0.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-10	VS-3 Heating Coil	Classroom Building	Not Listed	Not Listed	20	0.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-11	VS-4 Heating Coil	Classroom Building	Not Listed	Not Listed	20	0.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-12	VS-5 Heating Coil	Classroom Building	Not Listed	Not Listed	20	0.8	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-13	VS-1 Cooling Coil	Classroom Building	Not Listed	Not Listed	20	1.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-14	VS-2 Cooling Coil	Classroom Building	Not Listed	Not Listed	20	1.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-15	VS-3 Cooling Coil	Classroom Building	Not Listed	Not Listed	20	1.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-16	VS-4 Cooling Coil	Classroom Building	Not Listed	Not Listed	20	1.0	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-17	VS-5 Cooling Coil	Classroom Building	Not Listed	Not Listed	20	0.8	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-18	VS-6 Cooling Coil	Classroom Building	Not Listed	Not Listed	20	0.5	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-19	VS-6 Heating Coil	Classroom Building	Not Listed	Not Listed	18	0.3	N/A	N/A	68% **	2,464 *	N/A	1970	20	1990
P-1	Chilled Water	H-Building	Not Listed	Not Listed	112	15.0	N/A	N/A	68% **	1,989	N/A	1960	20	1980
P-1A	Chilled Water	H-Building	Not Listed	Not Listed	112	15.0	N/A	N/A	68% **	1,989	N/A	1960	20	1980
P-2	Chilled Water	Fine Arts Mech Room	Not Listed	Not Listed	112	60.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
P-2A	Chilled Water	Fine Arts Mech Room	Not Listed	Not Listed	112	60.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
P-3	Primary hot water	Fine Arts Mech Room	Not Listed	Not Listed	50	10.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
P-4	Primary hot water	Fine Arts Mech Room	Not Listed	Not Listed	50	10.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
P-5	Primary hot water	Fine Arts Mech Room	Not Listed	Not Listed	60	2.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
P-6	Reheat System	Fine Arts Mech Room	Not Listed	Not Listed	80	3.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
P-7	South West Exp	Fine Arts Mech Room	Not Listed	Not Listed	74	15.0	N/A	N/A	68% **	Not Listed	N/A	1996	20	2016
BP-1	AHU-1	Fine Arts Mech Room	Not Listed	Not Listed	28	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-2	AHU-2	Fine Arts Mech Room	Not Listed	Not Listed	28.6	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016

BP-3	AHU-3	Fine Arts Mech Room	Not Listed	Not Listed	28	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-4	AHU-4	Fine Arts Mech Room	Not Listed	Not Listed	28	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-5	AHU-5	Fine Arts Ceiling	Not Listed	Not Listed	31.8	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-6	AHU-6	Fine Arts Ceiling	Not Listed	Not Listed	33.4	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-7	AHU-7	Fine Arts Ceiling	Not Listed	Not Listed	32.2	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-8	AHU-8	Fine Arts Ceiling	Not Listed	Not Listed	33.4	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-9	AHU-9	Fine Arts Ceiling	Not Listed	Not Listed	32.2	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-10	AHU-10	Fine Arts Ceiling	Not Listed	Not Listed	28.6	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-11	AHU-11	Fine Arts Ceiling	Not Listed	Not Listed	28.3	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-12	AHU-12	Fine Arts Ceiling	Not Listed	Not Listed	28.1	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-13	AHU-13	Fine Arts Ceiling	Not Listed	Not Listed	28.3	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-14	AHU-14	Fine Arts Ceiling	Not Listed	Not Listed	28.9	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-15	AHU-15	Fine Arts Ceiling	Not Listed	Not Listed	32.2	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-16	AHU-16	Fine Arts Ceiling	Not Listed	Not Listed	33.3	0.8	N/A	N/A	68% **	1,537	N/A	1996	20	2016
BP-17	AHU-17	Fine Arts Ceiling	Not Listed	Not Listed	30	0.8	N/A	N/A	68% **	0	N/A	1996	20	2016
HW	Heating	CCICS	650	Not Listed	140	10.0	N/A	N/A	68% **	5,436	Staff	1976	20	1996
CHW	Cooling	CCICS	450	Not Listed	62	10.0	N/A	N/A	68% **	3,324 *	N/A	1976	20	1996
CW	Condensing Water	CCICS	675	Not Listed	47	15.0	N/A	N/A	68% **	3,324 *	N/A	1976	20	1996
DHW	Domestic Hot Water	CCICS	10	Not Listed	16	0.2	N/A	N/A	68% **	8,760 *	N/A	1976	20	1996
H	House	CCICS	150	Not Listed	260	12.5	N/A	N/A	68% **	Not Listed	N/A	1976	20	1996
F	Fire	CCICS	500	Not Listed	Not Listed	0.2	N/A	N/A	68% **	Not Listed	N/A	1976	20	1996
J	Jockey	CCICS	1	Not Listed	Not Listed	0.3	N/A	N/A	68% **	Not Listed	N/A	1976	20	1996
PS-1	S-1 Heating Coil	CCICS	38	Not Listed	25	0.8	N/A	N/A	68% **	5,436	Staff	1976	20	1996
PS-2	S-2 Heating Coil	CCICS	25	Not Listed	27	0.8	N/A	N/A	68% **	5,436	Staff	1976	20	1996
PS-3	S-3 Heating Coil	CCICS	27.2	Not Listed	25	0.8	N/A	N/A	68% **	5,436	Staff	1976	20	1996
PS-4	S-4 Heating Coil	CCICS	74	Not Listed	31	1.0	N/A	N/A	68% **	5,436	Staff	1976	20	1996
BP	Boiler	CCICS	112	Not Listed	25	1.0	N/A	N/A	68% **	5,436	Staff	1976	20	1996
P-1	Primary heating	PE Building	336	Not Listed	Not Listed	5.0	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-2	Primary heating	PE Building	336	Not Listed	Not Listed	5.0	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-3	Gym Cab Heaters	PE Building	17	Not Listed	Not Listed	0.8	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-4	HC-6	PE Building	30	Not Listed	Not Listed	0.8	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-5	HC-5	PE Building	40	Not Listed	Not Listed	1.0	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-6	HC-2	PE Building	10	Not Listed	Not Listed	0.5	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-7	Pool Loop	PE Building	40	Not Listed	Not Listed	1.0	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-8	HC-3	PE Building	30	Not Listed	Not Listed	1.5	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-9	HC-4	PE Building	90	Not Listed	Not Listed	2.0	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-10	HC-1	PE Building	20	Not Listed	Not Listed	0.8	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-11	A-Section Reheat	PE Building	42	Not Listed	Not Listed	1.5	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-12	Pool Heater	PE Building	35	Not Listed	Not Listed	0.3	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-13	RH-27 &RH-28	PE Building	8.69	Not Listed	Not Listed	0.3	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-14	RH-26	PE Building	20	Not Listed	Not Listed	0.5	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-15	HC-8	PE Building	10.6	Not Listed	Not Listed	0.5	N/A	N/A	68% **	Not Listed	N/A	1989	20	2009
P-1	Chilled water circulating	Library	1100	Not Listed	70	30.0	N/A	N/A	68% **	Not Listed	N/A	1978	20	1998
P-2	Hot water Heating circulating	Library	1040	Not Listed	60	25.0	N/A	N/A	68% **	Not Listed	N/A	1978	20	1998
P-3	Coil hot water circulating	Library	134	Not Listed	22	1.0	N/A	N/A	68% **	3,604	N/A	1978	20	1998
P-4	Coil hot water circulating	Library	131	Not Listed	23	1.0	N/A	N/A	68% **	3,604	N/A	1978	20	1998
P-5	Coil hot water circulating	Library	92	Not Listed	29	1.0	N/A	N/A	68% **	3,604	N/A	1978	20	1998
P-6	Coil hot water circulating	Library	52	Not Listed	26	0.8	N/A	N/A	68% **	3,604	N/A	1978	20	1998
P-7	Coil hot water circulating	Library	72	Not Listed	24	0.8	N/A	N/A	68% **	3,604	N/A	1978	20	1998
P-8	Condensate return	Library	5	Not Listed	115	1.5	N/A	N/A	68% **	Not Listed	N/A	1978	20	1998

**Estimated efficiency based on motor and pump industry standards

* Estimated based on pump operating requirements

NORESCO

Northeastern Illinois University
EQUIPMENT LIST

Chillers									
Northeastern Illinois University	Make	Model	Load (Ton)	kW/ton	Hours of Operation	Source (Logger /Staff)	Operating Condition (Model Yr)	Median Service Life [1] (Years)	Remaining Useful Life
CH-1	Carrier	19 XR -7776576 ENS68S	1250	0.655	1,989	Staff	1960	23	-27
CH-2	Carrier	19 XR -7776576 ENS68S	1250	0.655	1,989	Staff	1960	23	-27
CH-CCICS	Trane	PVC-2C	225	0.700	3324*	N/A	1976	23	-11

*Estimated based on cooling degree days

Cooling Towers									
ID	Fan Power (HP)	Load (Tons)	Make	Efficiency	Hours of Operation	Source (Logger /Staff)	Operating Condition (Model Yr)	Median Service Life [1] (Years)	Remaining Useful Life
CT-CCICS	20.0	Not Listed	ltimore Air C	Not Listed	3,324*	Staff	1976	20	-14
CT-H Bldg	120.0	2,426	ltimore Air C	Not Listed	1,989	Staff	1960	20	-30

Northeastern Illinois University
EQUIPMENT LIST

Boilers											
Northeastern Illinois University	Make	Model/Type	S/N	Year Built	Rated PPH	Rated Efficiency	Hours of Operation	Source (Logger /Staff)	Operating Condition (Model Yr)	Median Service Life [1] (Years)	Remaining Useful Life
CCICS Boilers (2)	Ajax WGB-4000	400	7516044	1975	Not Listed	80%	5436	Logger	1975	25	-10
Boiler 1	International Volcano	TJW-C	Not Listed	1960	Not Listed	82%	5436	Logger	1960	25	-25
Boiler 2	International Lamont	TJW-140	Not Listed	1960	Not Listed	83%	5436	Logger	1960	25	-25
Boiler 3	International Volcano	TJW-C	Not Listed	1960	Not Listed	75%	5436	Logger	1960	25	-25

2. FACILITY DESCRIPTION

INTRODUCTION

Northeastern Illinois University was founded in 1867 and currently serves about 12,000 students. The 67-acre main campus is located on Chicago's north side and three additional campuses are located within the Chicago metropolitan area. The scope of this energy project includes the primary buildings on the Main Campus, and the Carruther's Center for Inner City Studies (CCICS) on the South Campus. The Main Campus and CCICS encompass nearly 1.1 million square feet of building space and spend over $2.5 million in utilities per year.

The buildings on the north end of the Main Campus are served by a central heating and cooling plant. Three high temperature hot water boilers and two centrifugal chillers generate hot water and chilled water respectively to be distributed to heating, ventilating and air conditioning (HVAC) units located within each of the north end buildings. Four natural gas engine generators are also located in the central plant which can supply most of the campus electrical load, during an outage or when it is economical to do so. The existing Energy Management System at the Main Campus is comprised of four different systems which consist of a mix of pneumatic/electric and direct digital control (DDC) systems and components.

Buildings on the south end of campus, including the Phys Ed building, Child Care Center, Maintenance buildings and the CCICS are served by separate dedicated heating and cooling systems . Electricity, natural gas and water utilities are master metered at the campus level with a few sub-meters installed for individual buildings or groups of buildings. The heating load per square foot on the main campus is 82 MBTU/SF, which is much higher than the average usage of higher education facilities in the Midwest of 59 MBTU/SF.

Several energy efficiency improvement measures have been implemented on the campus within the last several years. Additional energy conservation and greenhouse gas reduction opportunities are being evaluated for inclusion in an energy efficiency performance contract. The overall performance contract will be funded through existing operating cost reductions, potential capital contributions and potential energy incentive grants or rebates. The project will also create several local jobs, while utilizing a high percentage of local minority and women-owned firms.
Below is a campus map and list of campus buildings.


Daily Parking Permit Sales Locations
*Due to campus renovation, department locations are subject to change. Please contact departments before visiting our campus to confirm their location.
Building A
Academic Advising
Accessibility Center
Foreign Language Lab
Student Support Services
Building B
Academic Computing
Computer Lab
Dean of Students
Graduate College
Honors Program
International Programs
Nontraditional Degree Programs
Placement Office
Building C (Sachs Administration)
Academic Affairs
Affirmative Action
Alumni Affairs
Budget Office
Development
Finance & Administration
Marketing & Communications
Media Relations
Mostly Music at NEIU
Office of the President
Purchasing
Sponsored Programs
Student Affairs
Building D
Adult and Women Students' Programs
Cashier
Counseling
Enrollment Services
Financial Aid
Student Employment
Veterans' Affairs
Building E
Auditorium
Bookstore
Health Service/First Aid
Building F (Stage Center Theatre)
Bernard Office Building (B.O.B.)
5555 N. Bernard, 60625
Human Resources
Internal Auditor
Fine Arts Center (FA)
Art Gallery
Box Office
Recital Hall
Building H
Facilities Management
Classroom Building (CLS)
Academic Development
College of Business and Management
College of Education
University Computing
Student Union (SU)
Alumni Hall
Cafeteria
Golden Eagles Room
Information Center
Student Activities
Science Building (SCI)
College of Arts and Sciences
Ronald Williams Library (LIB)
Public Safety (PS)
Parking Office
Facilities Management (FM)
Grounds Maintenance (GM)
Physical Education Complex (PE)
Child Care Center (CH)
Athletic Field (AF)
Tennis Courts (TC)
WTTW
University Commons
Parking Facility
ST. LOUIS AVE
BRYN MAWR AVE
ENTRANCE

Northeastern Illinois Campus Buildings

NAME	GSF	NASF
NORTH CAMPUS		
BUILDING A		
(NASF PRIOR TO REMODELING)	33,014	17,755
BUILDING B	36,374	22,765
BUILDING C	40,664	22,980
BUILDING D	53,360	31,735
BUILDING E	84,826	46,622
BUILDING F	16,698	8,475
FINE ARTS CENTER	104,930	58,990
BUILDING H - Central Plant	21,284	8,010
CLASSROOM BUILDING	148,662	81,400
STUDENT UNION	58,362	38,910
SCIENCE BUILDING	143,670	82,075
LIBRARY	141,232	115372
PARKING FACILITY		4,475
BUILDING I	1,440	560
BUILDING J	7,200	5,430
GROUNDS MAINTENANCE	4,500	3,665
PHYSICAL EDUCATION COMPLEX	117,300	87,285
CHILD CARE CENTER	5,583	4,380
NORTH CAMPUS TOTAL	**1,019,099**	**640,884**
BERNARD OFFICE BUILDING	6,408	4,745
SOUTH CAMPUS		
JACOB H. CARRUTHERS CENTER		
FOR INNER CITY STUDIES	65,070	34,635
STATE TOTAL OWNED		
LEASED		
EL CENTRO	11,566	11,535
CHICAGO TEACHER'S CENTER	17,029	10,390

List of Major Equipment

Please see the following pages below for a list of the major heating, ventilating and air conditioning equipment at Northeastern Illinois University

3. BASELINE ANALYSIS - AND SAVINGS METHODOLOGY

OVERVIEW

Energy Baseline Calculation Methodology

The NORESCO baseline development, measurement and verification methodology is based on industry accepted methods, such as those prescribed by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and the International Performance Measurement and Verification Protocol (IPMVP). The energy baseline represents energy consumption by the facilities as configured and operated before the project commences. The usage data for all three utilities: electricity, gas and water for the Main Campus and CCICS were obtained from the the NEIU Usage and Cost Summary spreadsheets from July 2006 to June 2009, as well as electricity interval data provided by Com Ed, actual utility bills and sub-meter reading provided by the University. The spreadsheet information was crosschecked with the billing data and meter data. Where there was conflicting data actual utility bills were used.

UTILITY DATA SUMMARY

Water & Sewer Baseline Usage Data

The water and sewer baseline consumption and cost data was provided by NEIU for both Main Campus and for the CCICS building. The provided data spans a range of three years, from July 2006 until June 2009, however NORESCO observed discrepancies between spreadsheet data and actual billed data. As noted above, billing data was used for our analysis, where there were discrepancies. The data show seven billing periods for both Main Campus and the CCICS building from October 2008 to October 2009.

Baseline flow rates were measured at each facility during the site walk through. Savings calculations use post-retrofit manufacturer's data to account for interacting energy conservation methods and will be verified using post-retrofit site measurements. Restroom fixture usage is based on measurements taken during the IGA, customer provided population data and industry standard estimates for fixture usage per person.

The data below represents actual usage taken from bills provided by NEIU. The billing months shown represent the month shown on the actual bill, and may incorporate data from one or more months at a time.

Table 3.1: Summary of Water Usage Data (Gal) -Main Campus and CCICS

Billing Month	'08-'09 Billed Usage
8-Oct	4,584,300
8-Nov	3,059,000
9-Feb	4,275,600
9-Apr	3,703,800
9-Jun	2,218,732
9-Aug	2,428,368
9-Oct	3,879,908
Total	24,149,708

Electricity Baseline Usage Data

The NEIU cost and usage summary spreadsheet was provided for a three year period beginning in July 2006. Utility bills were provided for July 2007–Sept 2009 for the Main Campus. Additionally actual bills were obtained from the University and electricity interval data was obtained from Com Ed for the calendar years 2007, 2008 and 2009.

The baseline period for analysis for both Main Campus and the CCICS building was established for July 2008 through June 2009 as it is the most current data available. The demand information was not available from the NEIU usage summary spreadsheet. Demand usage was taken from the Utility bills for July 2008 through June 2009.

Table 3.2: Summary of Electric Usage Data (kWh)- Main Campus

Month	FY2006	FY2007	FY2008	CY2007	CY2008
Jan	1,521,929	1,483,538	995,442	1,521,929	1,483,538
Feb	1,689,040	1,372,426	1,077,355	1,689,040	1,372,426
March	1,393,592	1,406,746	1,423,171	1,393,592	1,406,746
April	1,395,976	1,359,980	1,481,046	1,395,976	1,359,980
May	1,344,355	1,217,561	1,353,755	1,344,355	1,217,561
June	1,518,366	1,557,394	1,542,152	1,518,366	1,557,394
July	1,947,178	1,599,846	1,696,813	1,599,846	1,696,813
Aug	1,994,388	1,551,116	1,763,106	1,551,116	1,763,106
Sep	1,710,513	1,611,028	1,735,985	1,611,028	1,735,985
Oct	1,436,995	1,274,706	1,459,567	1,274,706	1,459,567
Nov	1,429,138	1,526,389	1,381,835	1,526,389	1,381,835
Dec	1,438,960	1,415,766	1,582,159	1,415,766	1,582,159
Total	18,820,430	17,376,496	17,492,385	17,842,109	18,017,110

Figure 3.1: Monthly Electric Profile- Main Campus

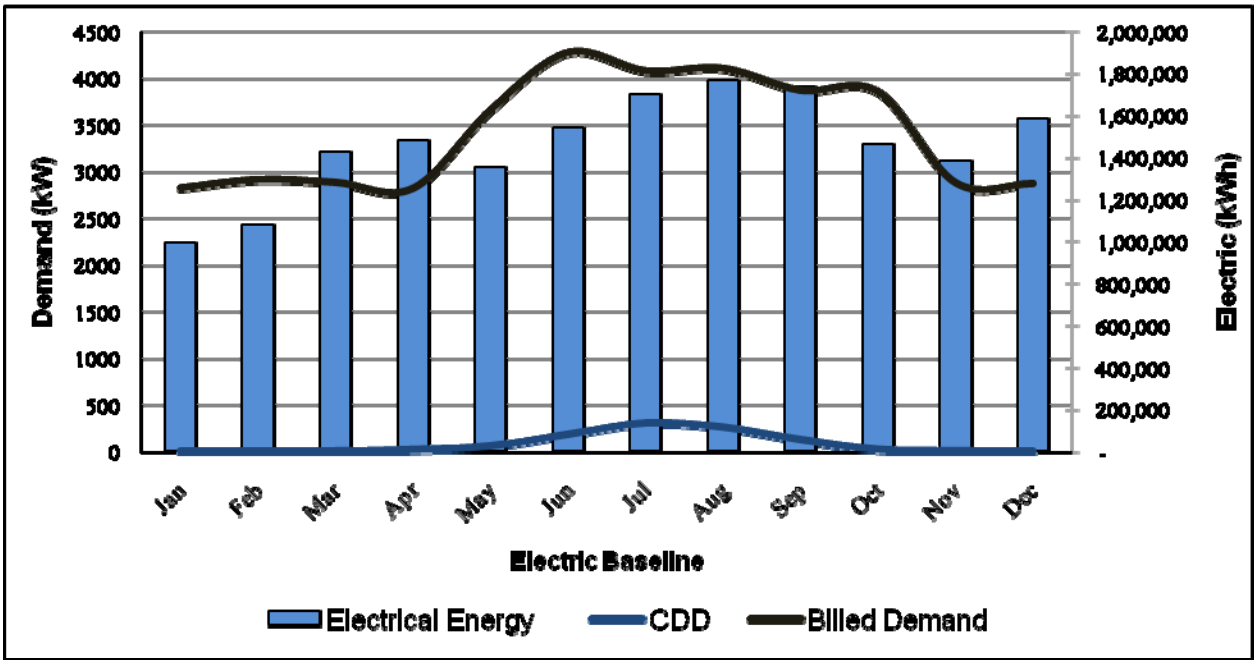
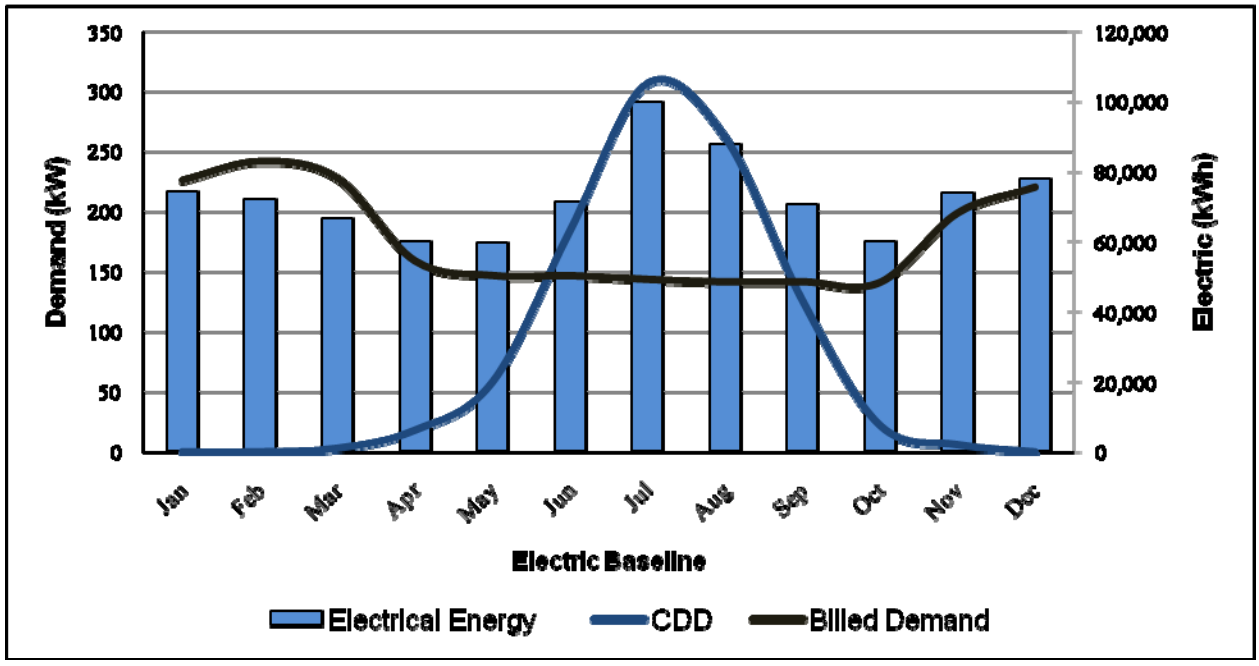


Table 3.3: Summary of Electric Usage Data (kWh)- CCICS

Month	FY 2007	FY2008	FY2009	CY 2007	CY 2008
Jan	43,014	77,424	74,095	43,014	77,424
Feb	110,504	72,998	72,108	110,504	72,998
March	64,605	66,584	66,488	64,605	66,584
April	66,611	64,574	59,893	66,611	64,574
May	81,909	70,590	59,488	81,909	70,590
June	85,043	77,023	71,198	85,043	77,023
July	94,194	90,661	99,824	90,661	99,824
Aug	86,942	102,247	87,766	102,247	87,766
Sep	70,865	74,204	70,730	74,204	70,730
Oct	65,093	65,407	59,972	65,407	59,972
Nov	74,999	73,056	73,896	73,056	73,896
Dec	71,627	73,056	77,930	73,056	77,930
Total	915,406	907,824	873,388	930,317	899,311

Figure 3.2: Monthly Electric Profile- CCICS



Natural Gas Baseline Usage Data

Reported monthly natural gas consumption data was provided beginning in July 2006. The baseline period was established as the average consumption for the Calendar Year 2008 and is summarized below in Table 3.4. This natural gas consumption for NEIU Main Campus and the CCICS building are given below.

The Calendar Year 2008 was chosen for the Main Campus baseline as the generators were running excessively during the 2009 period. To determine the savings for Main Campus buildings without generators, Calendar year 2008 was considered as the baseline period. For the CCICS building, the Fiscal Year 2009 was used for baseline and savings calculations.

Table 3.4: Summary of Natural Gas Usage Data (Therms)- Main Campus

Month	FY 2007	FY2008	FY2009	CY 2007	CY 2008
Jan	147,225	146,348	216,445	147,225	146,348
Feb	177,296	140,399	141,043	177,296	140,399
March	89,847	118,258	108,489	89,847	118,258
April	80,860	61,622	82,969	80,860	61,622
May	28,023	35,581	37,970	28,023	35,581
June	35,649	29,577	50,681	35,649	29,577
July	17,193	29,453	39,714	29,453	39,714
Aug	29,093	65,693	32,971	65,693	32,971
Sep	20,590	39,732	30,556	39,732	30,556
Oct	67,137	55,770	58,273	55,770	58,273
Nov	91,434	94,637	100,376	94,637	100,376
Dec	109,314	121,412	145,256	121,412	145,256
Total	893,663	938,484	1,044,744	965,599	938,932

Figure 3.3: Monthly Natural Gas Profile (Therms)- Main Campus

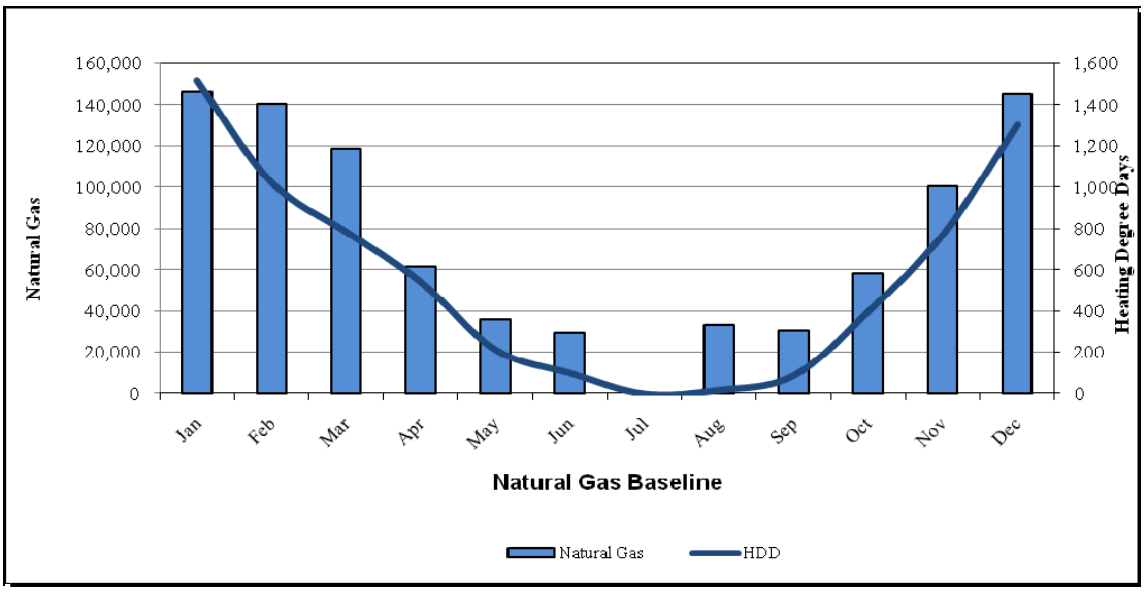
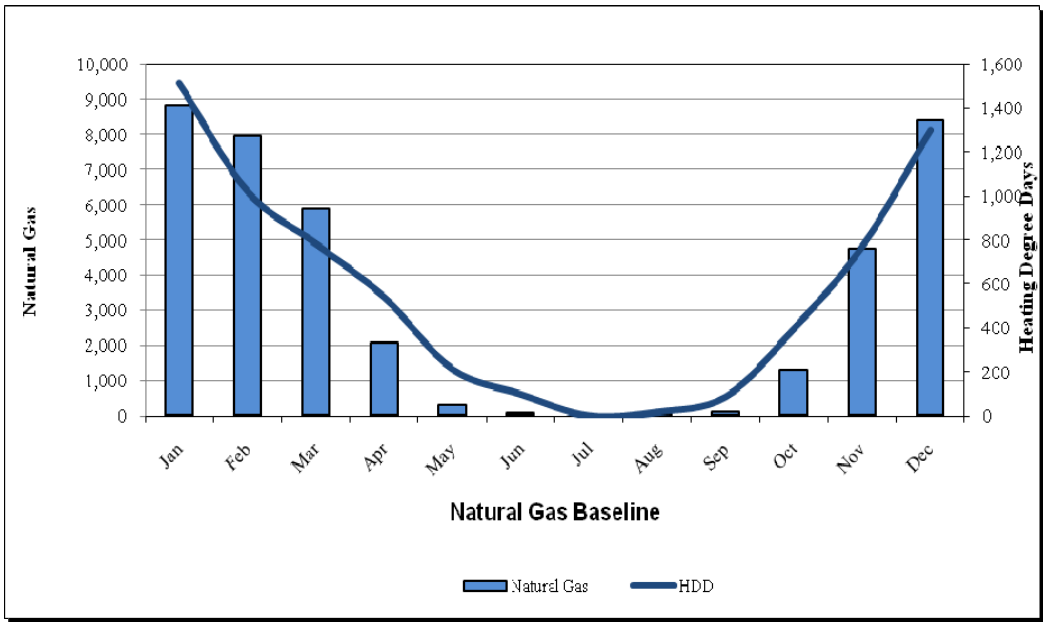


Table 3.5: Summary of Natural Gas Usage Data (Therms)- CCICS

Month	FY 2007	FY 2008	FY 2009	CY 2007	CY 2008
Jan	7,542	8,817	10,627	7,542	8,817
Feb	8,974	7,959	6,979	8,974	7,959
March	4,055	5,894	5,054	4,055	5,894
April	2,910	2,062	3,275	2,910	2,062
May	124	297	65	124	297
June	112	86	65	112	86
July	87	150	134	150	134
Aug	96	105	120	105	120
Sep	144	118	118	118	118
Oct	2,564	576	1,309	576	1,309
Nov	3,542	4,031	4,752	4,031	4,752
Dec	5,525	6,604	8,387	6,604	8,387
Total	35,675	36,697	40,884	35,300	39,934

Figure 3.4: Monthly Natural Gas Profile- CCICS



UTILITY RATES

The following table summarizes the utility rates used within all savings calculations. These rates were obtained from review of current utility bills and supplier contracts. Because they are market based, and fluctuate year to year, the gas and electric rates were evaluated as three year averages. Because they are tariff rates and have been ever increasing, the water and sewer rates were determined using a recent 12 month period average; October 2008 to October 2009.

The three year average natural gas rate was determined to be $0.82 per therm. However, he most recent period gas rate of $0.70 / therm was used for all calculations at the request of the University. Both of these gas rates are significantly lower than the gas rate used during the proposal phase of this project ($0.957 per therm). Utility rates for water and sewer consumption are relatively low in comparison to other locations around the country.

Table 3.6: Utility Rate Summary

Utility Rates

Service	Cost	Unit
Electric	$0.07	kWh
Electric	$5.50	kW
Natural Gas	$0.70	Therm
Water	$1.90	Kgal
Sewer	$1. 61	Kgal

CALCULATION METHODOLOGY

Baseline and post-installation energy consumption as well as savings calculation were established using various approaches for each Energy Conservation Measures (ECM) depending on measure complexity and information that we gathered during the detailed audit. The Table below shows the analysis approach for the evaluated measures.

Table 3.11: Analysis Methodology

ECM	Analysis Approach
Co-Gen Optimization	Excel spreadsheet and PJM Hourly Pricing
HTHW System Efficiency Improvements	Excel spreadsheet
Chiller Plant System Improvements	Excel spreadsheet
Control System Upgrades - INET Seven	eQUEST
HVAC System Efficiency Improvements	eQUEST
Window Upgrades	eQUEST
Renewable Initiatives	RETScreen
CCICS Efficiency and Infrastructure Upgrades	eQUEST

As can be seen from the Table above, we used eQUEST building simulation models for a number of ECMs. Details about the baseline, post-installation, and model calibration are presented further in this Section. Calculation methodologies for ECMs with approach different than eQUEST are shown at the end of the ECM specific description sections.

NORESCO established the baseline energy consumption by creating a model of the building under existing conditions using the DOE-2.2 building simulation software (created with eQUEST Version 3.63). We created two models – one for the main campus (including buildings A, E, D, Science, Classroom, Library, Student Union, and Fine Arts) and another for the CCICS building. We measured several key parameters, such as fan power and airflow rates, and boiler

efficiency, and used these values as inputs for the simulation models. We then calibrated the models so that the energy consumption and electric demand were reconciled with historical utility data.

NORESCO calculated the post-installation energy consumption by modifying the baseline model inputs associated with the scope of work for each measure. This included changing the occupied space temperature, converting units from constant flow to variable flow and setting a min flow ratio, changing the performance curve of the existing chillers, and other parameters that reflect the evaluated improvements.

The savings calculations and governing assumption for individual energy conservation measures (ECM) are shown in the Appendix Section II.

Simulation Model Software

We used eQUEST 6.3 to simulate the existing and proposed conditions. eQUEST is designed to perform detailed analysis of state-of-the-art building design technologies using sophisticated building energy use simulation techniques. This is accomplished by combining a building creation wizard and a graphical results display module with a DOE-2.2 derived building energy use simulation program. DOE-2.2 is a set of computer programs that predict the hourly energy use of a building given hourly weather information and a description of the building and its HVAC equipment.

Other Simulation Model Inputs

- Building envelope inputs such as building orientation, interior and exterior wall structure, roof structure, and window properties were obtained from architectural drawings and site visits.
- Occupancy schedules and HVAC equipment operating hours were based on information provided by site personnel and data gathered during the audit.
- Lighting usage was input based on the lighting audit performed by NORESCO. Interior lighting was input into eQUEST in lighting density values of W/sq ft. The lighting intensities and schedules in the simulation model were adjusted to ensure that the annual lighting usage (kWh) and peak demand (kW) matched those from the audit.
- Plug load usage and daily profile was adjusted so that the simulation model electric consumption and demand match the utility data provided by NEIU personnel.
- HVAC equipment inputs were based on baseline measurements, data gathered from engineering drawings, and NORESCO's site visits. We engaged a certified testing and balancing contractor to measure airflow rates on a sample of air handling units

throughout the campus. We also performed instantaneous power measurements on a sample of fan motors in various buildings over the course of the detailed audit. The results of the airflow and power measurements were extrapolated to the rest of the fan systems by multiplying the design flow rates and rated horsepower by the weighted average load factor.

- HVAC control schedules, setpoints and strategies were based on information provided by facility staff and information gathered from the energy management system during NORESCO's site visits.
- Zoning was determined based on mechanical floor plans provided by NEIU.

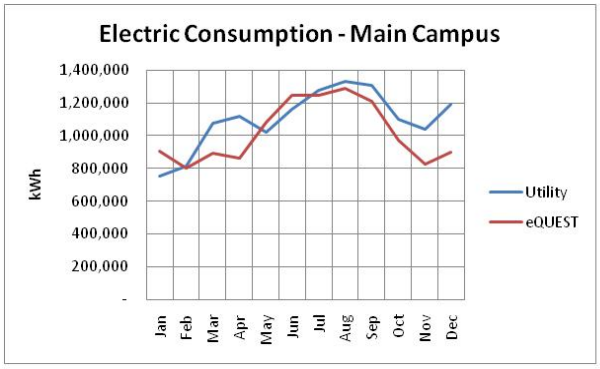
Simulation Model Calibration

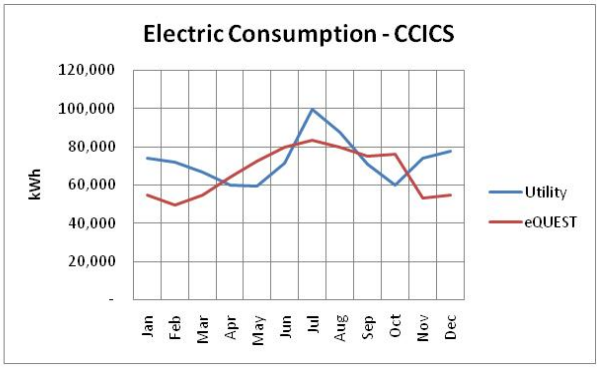
Calibration of building simulation models is the process used to refine and adjust the model's inputs so that the results predicted by the model are consistent with the metered energy use under the same conditions. Monthly utility data such as electric consumption, electric demand, and natural gas consumption was provided to us by NEIU. In order to analyze the actual building energy performance, the weather data file used by the simulation software had to be modified so that it uses weather data for the same period as the utility data. Daily dry-bulb and wet-bulb temperatures, barometric pressure, wind speed and direction, cloud cover, visibility, and solar radiation data was gathered from the National Climatic Data Center (NCDC) and then compiled into a bin file and loaded into the DOE-2.2 weather library.

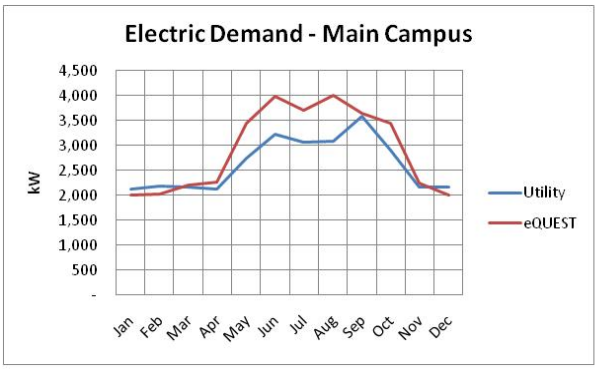
The utility data for the main campus that was provided to us by NEIU included all buildings on the campus. However, the eQUEST model included only buildings that were evaluated during the audit. Therefore, we reduced the utility energy consumption and electric demand by the ratio of the modeled building area are and the area of all buildings on the main campus. The CCICS building has a separate set of utility data so no adjustments to the energy consumption and electric demand were needed.

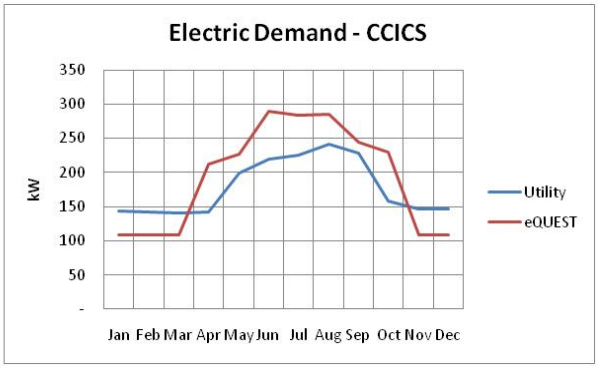
The monthly energy consumption and demand outputs from the simulation model were plotted in graph with the monthly utility consumption to assure that the model is calibrated to generate output trends similar to the energy consumption and demand of the actual building both in magnitude and pattern. The results of the simulation model calibration are shown below in Figure 3.5.

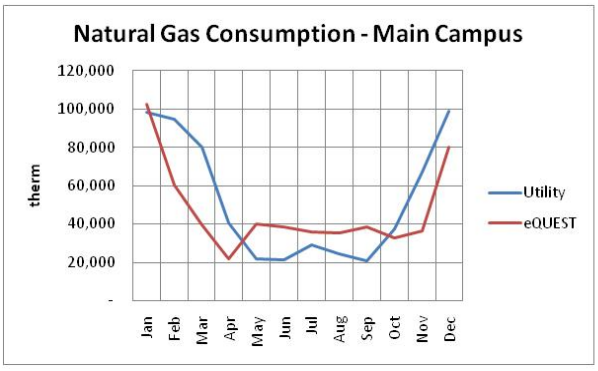
Figure 3.5: Results of the Simulation Model Calibration

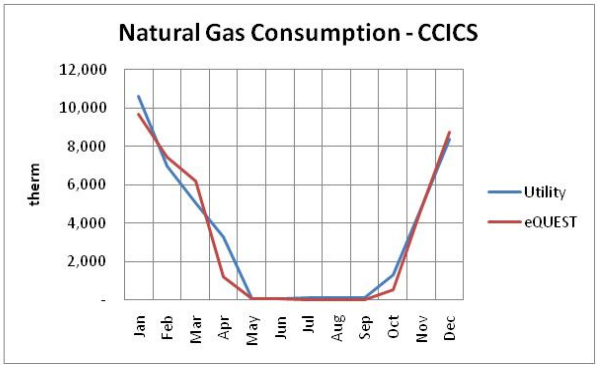












MEASUREMENT DATA AND BASELINE MODEL INPUTS

AHU Fan Baseline

Airflow

The following table represents the building simulation model input data used for supply air flow for various systems. The supply air flow rate for several fans was measured using the duct traverse method where multiple air velocity measurements are taken at multiple equal-spaced points to get a good average air velocity which was then multiplied by the duct cross-sectional area to obtain the measured volume flow rate in CFM.

Table 3.7: Summary of Airflow Measurements

Building	Unit	Design CFM	Measured CFM	Load Factor
Science	S-1	37,800	50,910	1.35
	S-2	29,800	26,840	0.90
	S-4	31,400	32,866	1.05
Library	S-1	45,230	59,000	1.30
	S-2	43,280	46,270	1.07
	S-3	30,070	42,412	1.41
Classroom	V-1	23,130	26,100	1.13
	V-2	24,380	20,460	0.84
	V-3	31,800	28,160	0.89
	V-4	30,200	43,380	1.44
	V-5	16,300	18,160	1.11
Student Union	AHU-1	20,639	23,940	1.16
	AHU-2	16,829	23,650	1.41
	AHU-5	10,000	9,331	0.93
D	D-1	N/A	60,100	N/A

Fan Power, Runtimes, Discharge Air Temperatures and Space Temperatures

The fan power was measured on the fans listed in Table 3.8 using a calibrated Fluke 434 three phase power meter. In addition to power, amps, volts and power factor were also measured and documented. Fan runtimes, discharge air temperatures and space temperatures on selected systems were trended on the Honeywell Building Automation System (BAS) at the main campus. Loggers were utilized at the CCICS building to track space temperatures and runtimes on the HVAC systems. Samples and graphs of this data are included in the Appendix Section 8.0.

Table 3.8: Summary of Fan Power Measurements

Building	Unit	Rated HP	Rated kW	Measured kW	Load Factor
Science	S-4	40.0	29.8	22.2	0.74
Library	S-1	40.0	29.8	31.1	1.04
Classroom	V-5	40.0	29.8	21.3	0.71
Student Union	AHU-1	40.0	29.8	18.4	0.62

Boiler Efficiency

The boiler efficiency was measured using a calibrated combustion analyzer for the three operable boilers on the Main campus and one of the boilers in the CCICS building. The second boiler at the CCICS building was offline during the time the measurements were performed. Table 3.9 lists the measured efficiency values for the four boilers. In addition to the efficiency measurement, the stack temperature, oxygen level, and excess air in the flue gases.

Table 3.9: Summary of Boiler Combustion Efficiency Measurements

Building	Unit	Rated Capacity (MMBtu/h)	Measured Efficiency
H	Boiler 1	15.0	82%
	Boiler 2	15.0	73%
	Boiler 3	15.0	75%
CCICS	Boiler 1	4.0	72%
	Boiler 2	4.0	N/A

Chiller Baseline

In order to establish the baseline for the existing chillers energy consumption, NORESCO obtained performance data under ARI and part-load conditions from the chiller manufacturer, as shown in the Table below. The data included chiller efficiency for various entering condenser water and leaving chilled water temperatures. We used this data to create performance curves which were used as inputs for the spreadsheet and building simulation models. The first curve is a bi-quadratic curve that adjusts the electric input ratio as a function of the leaving chilled water temperature and condenser water temperature. The curve normalizes to 1.0 at the rated chilled water and condenser water temperatures. The second curve that was created is a bi-quadratic curve that adjusts the electric input ratio as a function of the part load ratio and the differential between the condenser and leaving chilled water temperature.

Table 3.10: Summary of Chiller Part Load Performance Data (kW/ton)

TON	ECWT/LCHWT								
	85/42	85/44	85/46	75/42	75/44	75/46	65/42	65/44	65/46
1,250	0.6550	0.6406	0.6284	0.5899	0.5829	0.5766	0.5519	0.5438	0.5422
1,125	0.6457	0.6337	0.6218	0.5796	0.5769	0.5743	0.5481	0.5488	0.5505
1,000	0.6420	0.6331	0.6273	0.5869	0.5842	0.5817	0.5575	0.5591	0.5602
875	0.6486	0.6423	0.6367	0.5957	0.5920	0.5925	0.5655	0.5662	0.5683
750	0.6618	0.6569	0.6542	0.6086	0.6107	0.6141	0.5829	0.5889	0.5954
625	0.6917	0.6850	0.6845	0.6402	0.6432	0.6458	0.6170	0.6226	0.6363
500	0.7340	0.7346	0.7396	0.6910	0.6991	0.7069	0.6685	0.6815	0.7043
375	0.8391	0.8438	0.8467	0.7912	0.7960	0.7971	0.7473	0.7839	0.8357
250	1.0251	1.0213	1.0175	0.9285	0.9296	0.9471	0.9300	1.0245	1.1424
125	1.4449	1.4289	1.4257	1.3343	1.3649	1.4630	1.6116	1.7478	1.9159

4. ENERGY CONSERVATION MEASURES

INTRODUCTION

Evaluated Measures

NORESCO has evaluated literally dozens of potential energy saving conservation measures (ECMs) and Infrastructure Upgrades at NEIU. At the University's direction we concentrated on evaluating ECMs that contributed to the following goals:

- Obtain consistent levels of comfort and safety
- Reduce energy consumption and costs
- Contribute to a more sustainable and "Green" campus
- Enhance the operability of the facilities
- Incur no capital upfront costs
- Self fund within a 20 year term in aggregate
- Achieve a measured and verified long term savings guarantee

The final list of ECMs adds up to over $12 million dollars worth of projects. In staying with NEIU's goal of creating a project that funds in under 20 years, considering a 5% interest rate and 3.5% escalation factor, we arranged one scenario worth over $7.4 million dollars that cashflows from savings in under 20 years. For illustration purposes, we also arranged a project worth over $6 million that cashflows in less than 16 years. Both of these projects are detailed within the "Financial Summary" section of this document. Below is a brief summary of the complete list of ECMs following individual write ups for each. Also included in this section are descriptions of ECMs that were considered but not necessarily recommended at this time.

Northeastern Illinois University
Comprehensive List

#	ECM	Price	Savings	Simple Payback
1	**Co-Gen System Optimization**	$ -	$ -	--
1a	Co-Gen Optimization w/ Exh HR (stand alone)	$ -	$ -	--
1b	Co-Gen Optimization w/ Exh HR (interacted)	$ 1,260,606	$ 160,937	7.8 Yrs
2	**HTHW System Efficiency Improvements**	$ -	$ -	--
2a	HTHW Boiler New Controls	$ 101,595	$ 21,033	4.8 Yrs
2b	HTHW Pump VFDs	$ -	$ -	--
2c	Pump Seal Cooling Water Recirc	$ 94,199	$ 8,269	11.4 Yrs
2d	HTHW Pipe Insulation	$ 71,280	$ 7,694	9.3 Yrs
3	**Chiller Plant System Improvements**	$ -	$ -	--
3a	Chiller Compressor VFD	$ 541,353	$ 24,378	22.2 Yrs
3b	Chiller Visor Controls	$ 94,983	$ 3,790	25.1 Yrs
3c	CHW Distribution System Improvements	$ -	$ -	--
3d	New CW Pumps & Filtration System	$ 306,270	$ -	--
4	**Lighting Efficiency Upgrades**	$ 1,640,293	$ 145,485	11.3 Yrs
5	**Water Efficiency Upgrades**	$ 482,474	$ 30,826	15.7 Yrs
6	**Control System Upgrades - INET**	$ 2,281,144	$ 164,576	13.9 Yrs
7	**HVAC System Efficiency Improvements**	$ -	$ -	--
7a	D-1 Unit HW Coil & VFD	$ 95,599	$ 8,536	11.2 Yrs
7b	VAV at LWH	$ 978,767	$ 30,560	32.0 Yrs
7b'	VAV at LWH (VFD Only)	$ 129,183	$ 23,715	5.4 Yrs
7c	VAV at Library	$ 619,833	$ 54,685	11.3 Yrs
7c'	VAV at Library (VFD Only)	$ 153,462	$ 40,916	3.8 Yrs
7d	Pool Pump VFD	$ 46,167	$ 7,592	6.1 Yrs
7f	Kitchen Hood Controls	$ 60,798	$ 7,919	7.7 Yrs
8	**HVAC System Infrastructure Upgrades (New**	$ -	$ -	--
8a	New AHU (Incl VAV) at Blg E	$ 879,584	$ 9,822	89.6 Yrs
8b	New Induction Units at LWH	$ 923,967	$ -	--
8c	New HW H/EX at Science	$ 74,372	$ -	--
9	**Window Upgrades**	$ 902,489	$ 2,525	357.4 Yrs
10	**Renewable Initiatives**	$ 264,893	$ 1,851	143.1 Yrs
11	**CCICS Efficiency and Infrastructure Upgrades**	$ -	$ -	--
11a	New Heating Boilers	$ 353,236	$ 4,380	80.6 Yrs
11b	Tower Fan VFD	$ 16,756	$ 376	44.6 Yrs
11c	New DW Pump Package	$ 69,497	$ -	--
	TOTAL	**$ 12,442,796**	**$ 759,865**	**16.4 Yrs**

Infrastructure Improvements

The energy savings generated by some of the measures allows NEIU to include several deferred maintenance, or infrastructure upgrade, projects into our overall project scope if desired. These projects do not, in most cases, result in energy savings, but will address building infrastructure items and result in improved system performance, improved comfort and reduced operating problems and maintenance costs. Based on discussions with University staff we have evaluated the following deferred maintenance projects within the scope of our energy audit. This is not a definitive list but represents items that could best be installed in conjunction with the other recommended measures. During final Energy Services Contract development we would determine, along with the University, which potential infrastructure projects to implement.

Evaluated Infrastructure Improvement Measures

- New Boiler and Chiller Control systems
- New condenser water pump & filtration system
- Chiller eddy current testing
- New water fixtures (china and valves)
- New control panels and coil valves
- Re-commissioning of VAV box controls
- New HW Coil for AHU D-1
- New air handling units in Buildings E
- New Lech Walesa Hall induction units
- New heat exchanger in Science Building
- New windows
- New CCICS boiler plant
- New CCICS controls
- New CCICS domestic water pumping system

.

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Energy Conservation Measures

ECM 1 CO-GEN OPTIMIZATION

OVERVIEW

NEIU operates 4 Caterpillar G3516 130 LE Gas engine generator sets in Chicago, Illinois. The units can produce 770 kW of electric power each, and recover heat from the engine jacket water to preheat returning water for the hot water generators. Currently, the University makes a daily decision on whether it is more economical to purchase electricity from the grid or self-generate using the engines. Historically, based on this analysis, it has been economical to run the engines a limited number of days each year. NEIU also participates in the PJM Emergency Response Program, which pays the University a sum of money each year for utilizing the engines when called upon by PJM to reduce transmission systems load on "event days".

NORESCO evaluated installing two new waste heat recovery units (WHRU) to recover heat from the engine exhaust of the 4 Caterpillar units; two Caterpillar units will feed one waste WHRU. Operating the Caterpillar generator sets with the existing jacket water waste heat recovery units and the proposed exhaust WHRU will supplement the existing hot water boilers in addition to producing electrical energy to offset electrical demand. In addition to improving the overall efficiency of the cogen system, the savings from operation of the generator sets is enhanced by NEIU's participation in the PJM Emergency Response Program and the Economic Response Program. However, the value of the Emergency Response Program is highly dependant on a proposed program structure and the hourly PJM rates, as discussed below.

It should be further noted that as a stand-alone Energy Conservation Measure, installing exhaust heat recovery and utilizing the existing engines to offset electrical and thermal energy is a fairly attractive, even when factoring in the increased engine maintenance requirements (based on increased engine run hours). However, if the University invests in other load reduction energy conservation measures the economics of the Co-Generation measure are greatly compromised. The impact of these savings interactions is not linear and is based on a complicated hourly analysis.

DETAILED DESCRIPTION

Existing System Description

The existing four Caterpillar G3516 130 LE generator sets, located in the Central Plant, Building H, have waste heat recovery on the jacket water but do not include any waste heat recovery on the engine exhaust. The waste heat from the jacket water is used to preheat the return water from the campus prior to entering the existing hot water boilers. Based on internally developed

financial models, the generator set units are not run any significant number of hours (less than 4,000 hours in 10 years) and are primarily used as peak shaver units. NEIU does currently participate in the PJM Emergency Demand Response Program (through ComEd), which results in a cash payout each year for having the engines available for emergency demand response when called by PJM.

The lack of exhaust waste heat recovery allows a significant amount of energy to escape out the stack that could be used to supplement the existing hot water boilers and potentially make the engines economically attractive to run for significantly more hours each year.

Proposed Improvements

NORESCO evaluated installing two new exhaust waste heat recovery units on the exhausts of the four Caterpillar units to extract more value out of the existing engines. The hot water from the WHRUs would be added in series to the existing jacket water waste heat recovery units. After passing through the jacket water and exhaust waste heat recovery units, the waste heat recovered would offset the fuel required in the existing hot water boilers and in some circumstances eliminate the need to run the existing hot water boilers. Typically in the summer months, the existing hot water boilers operate at low loads. Operating in this region of low loads causes the boilers to be more inefficient than if operated at higher loads. Being able to shut the boilers down during lower summer loads would improve the overall Central Plant efficiency.

Currently, only 3 out of the 4 Caterpillar units run at a given time. With the proposed operation this strategy would not be continued; units will come on line as load dictates. However, based on the electrical and thermal load profiles, there will be significant times that multiple generators will be available but not running. The existing Caterpillar generator sets, with the new WHRUs, would be run to maximize the economic benefit of producing electricity and off-setting campus thermal loads. Therefore, the units will only operate during times that there is sufficient electrical and thermal demand as to offset the cost of the natural gas consumption for the generator sets. The electrical energy (kWh) produced by the generator set will offset the electrical demand of the campus, and will allow NEIU to participate in the PJM Emergency Demand Response and Economic Demand Response programs on a more consistent basis. The heat recovered from the jacket water and the exhaust WHRU will be used to preheat the incoming water for the hot water boilers and will offset natural gas usage in the existing hot water boilers. ECM interaction has been accounted for by the reduction of the baseline for both electrical and natural gas consumption.

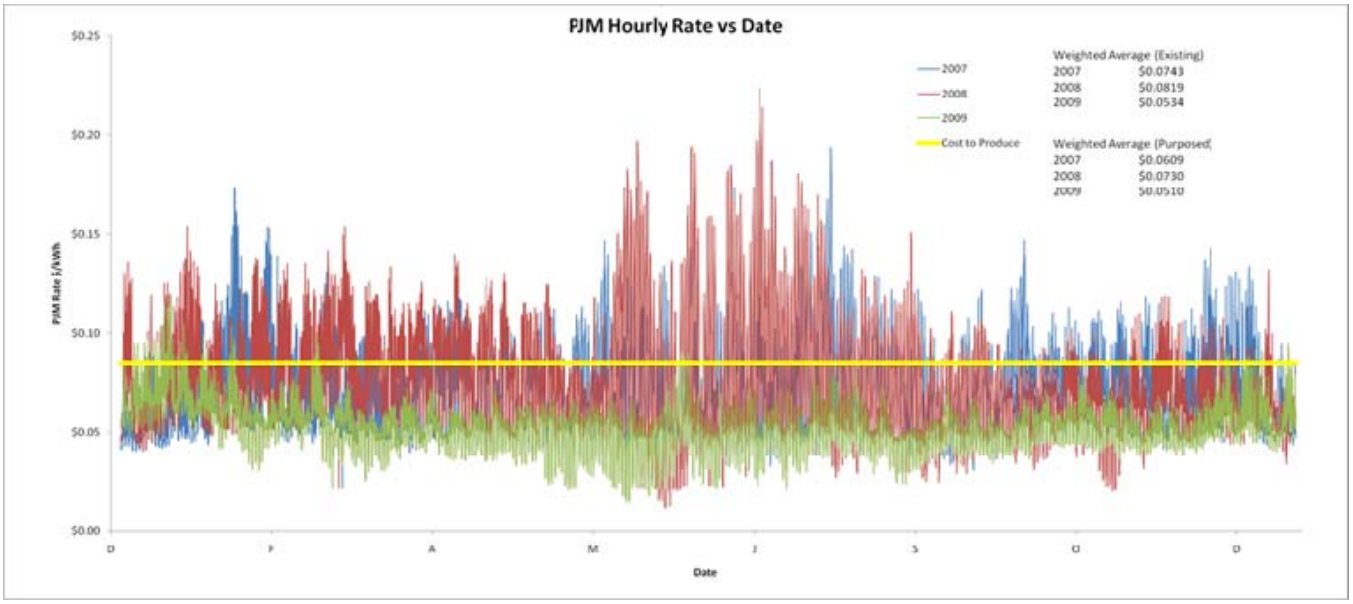
NEIU currently participates in the PJM Emergency Demand Response Program, but does not participate in the PJM Economic Demand Response Program. PJM allows the participation in both programs simultaneously.

Hourly data from the PJM Economic Demand Response program for calendar years 2007, 2008 and 2009 were downloaded to establish past performances. Typically, the PJM Economic Demand Response Program pays the difference between the customer's energy rate and the hourly PJM Economic Demand Response Program rate. Currently, NEIU is enrolled in a rate structure that equals the PJM hourly rate plus an adder. Therefore, the rate NEIU pays is always

more than the rate the PJM Economic Demand Response Program would offer. However, there is a new PJM Economic Demand Response Program in proposal that establishes a different payment mechanism. There is a threshold value, possibly the top 20% rate values from the previous year, which triggers a different mechanism. Once the PJM Economic Demand Response Program hourly rate reaches the threshold, the program will pay a rate equal to the PJM hourly rate, rather than the difference between the rates. In order to participate in the Economic Demand Response Program, NEIU must make a daily decision to participate based on rates provided by PJM on the previous day.

The PJM Emergency Demand Response Program allows NEIU to generate revenue based on the ability of the campus to generate electrical power on event days compared to NEIU's electrical consumption on baseline monitoring days. To maximize revenue generation from the PJM Emergency Demand Response Program, NEIU would be required to coordinate the baseline monitoring days with on campus electrical generation. The difference between the agreed to electrical production and the electrical consumption on the baseline monitoring day establishes the revenue for the entire year.

With this proposed program structure and 2007-2008 hourly PJM prices, participation in this program would be very lucrative. However, PJM rates dramatically decreased in 2009 making the value of this proposed program minimal. The 2009 PJM rate drop is likely due to current economic conditions and lower gas rates. The University should monitor PJM rates and the proposed program structure in the near future as these factors will have a large impact on the value of running the existing engines. Refer to the chart below for a summary of the three-year PJM hourly prices vs. the cost for NEIU to self-generate electricity.



Scope of Work

In addition to installation of exhaust waste heat recovery units, this ECM will include the addition of new monitoring equipment, a new monitoring screen, six graphic screens and extending existing cogen system monitoring points to the central control room on the first floor of the Central Plant. This will mitigate the need for a dedicated operator to monitor cogen operations.

Waste Heat Recovery Units Project

1. Mechanical Demolition / Removal: NORESCO shall demolish and remove the following existing equipment and piping:
   1) Silencer for GEG #1.
   2) Pumps P-5 and P-6.
2. Electrical Demolition/Removal: NORESCO shall demolish and remove the following existing electrical equipment and systems:
   1) Cabling for Pumps P-5 and P-6.
   2) Breakers for P5 and P6 pumps
3. Mechanical New Work Installation: NORESCO shall furnish and install complete and functional systems in accordance with Owner and approved final design submittal documents specifications and drawings.
   1) Provide two (2) WHRU's. Kickham Boiler model ECXWV-4470-1.5 SPCL Bare fire tube exhaust waste heat recovery unit complete with aluminum jacketed blanket insulation (suitable for indoor installation) for maximum operating hot water service of 250 F, and 100 PSIG design pressure per ASME Code Section IV.
   2) Provide all piping, valves and controls to fully integrate the two WHRU's into the existing Cogeneration Plant.
   3) Provide two new pumps with seal water cooling heat exchangers. Pumps to be rated for 300 F hot water service.
   4) Provide piping and valves for pump seal cooling seal water supply and drain discharge.
   5) Provide valve on the water outlet of the WHRU that allows for balancing of flow between the two WHRU units.
   6) Provide the following WHRU accessories from the WHRU supplier:
      a) Two (2) Pressure Gauge with siphon and shut off valve to comply with ASME Section IV paragraph HG-611.
      b) Two (2) thermometers to comply with ASME Section IV paragraph HG-612.
      c) Two (2) high Temperature Limit Switches to comply with ASME Section IV paragraph HG-613 (a).
      d) Two (2) high Temperature Control Switches to comply with ASME Section IV paragraph HG-613 (b).
      e) Two (2) electrical Low Water Heat Source Cutoffs to comply with ASME Section IV paragraph HG-614.

f) Four (4) Model EDVPT-14-MS Pneumatic metal seated external exhaust gas by-pass tees with pilot (provides 100% turndown, approximately 1½ to 2½ % leakage). Bypass Tee to modulate to maintain WHRU outlet water temperature.
g) Safety interlocks for EDVPT consisting of flow switch, temperature switch with an on-delay timer.
h) Four (4) Model EDDVP-14-MS Double Disc positive shut off block and purge valve to isolate the engine when it is not running.
i) Four (4) blanking plates with jacking screws to enable the waste heat recovery unit to be isolated from the exhaust stream for servicing while still operating the engine.

7) Provide an emergency pressure relief vent valve on the common engine exhaust pipe upstream of each WHRU. The explosion relief valve to include spring and rods for controlling the damper.

4. Electrical New Work Installation:

1) Provide two (2) new breakers in existing MCC for P5 and P6 pumps.
2) Provide new cable feeds from new breakers to pumps P5 and P6.

5. Instrumentation and Controls New Work Installation:

1) Provide all required safety relief valves, controls and safety interlocks required by ASME Boiler and Pressure Vessel Code, International Building Code, State of Illinois Building code, NFPA and City of Chicago Boiler Code and Fire Department requirements.
2) Provide Gages, Transmitters, Switches and Interlocks
3) Provide all required software programming of the new PLC and existing ICONICS system, cabling and transmitters to provide the following instrumentation interface with the existing ICONICS Cogeneration Monitoring System:

a. Display Six (6) Temperature Readings (3 per WHRU) as indicated by TT on P&ID.
b. The position of all four WHRU Bypass damper/valves (EDPVT 14-MS). The ICONICS should display if the valve is in Bypass or Heat Recovery position.

The new interface PLC should have enough spares for the following:

c. Four (4) additional analog input points
d. Four (4) additional digital input points.
e. Four (4) digital output points to drive the bypass valves open/shut.
f. Four (4) digital input points to confirm bypass valves open/shut.

4) Provide control interface between new PLC and existing Cogen Plant Control System (GE Fanuc system) that upon GEG start command the WHRU Bypass Valves are opened to 100% bypass mode. Provide feedback to existing Cogen Plant control system to shut down GEG within 3-seconds if Bypass Valve is not in 100% bypass mode.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

Existing generator sets will be utilized year round to offset both electrical and thermal loads.

Illinois EPA exempts NEIU's generators from air permitting because of the relatively small unit size. However, additional run time on the Caterpillar generator sets will require additional maintenance on the units. Some of the increased maintenance costs will be offset by the reduced run times on the existing hot water boilers**.** Cost estimates, provided by Patten Co, NEIU's current engine-generator service provider for preventive maintenance and minor overhauls were used to estimate this increase in generator maintenance costs.

The addition of new monitoring equipment located in the central control room, will allow existing staff to monitor the Caterpillar generator sets and the existing hot water boilers from one location.

COMMISSIONING PROCEDURE

NORESCO will provide complete, testing, adjusting, and commissioning of controls upon completion of installation

CUSTOMER TRAINING

Training will be provided for facility personnel on the new equipment and the operating strategies being implemented and the factors influencing their performance, as well as on the operation and maintenance of newly installed components. New PM requirements and troubleshooting procedures will be reviewed.

1. NORESCO shall provide one (1) four (4) hour session of on-site training on the various pieces of equipment and systems that NORESCO has installed as part of its Work. Training shall be scheduled at Owner's convenience. One week prior to the scheduled training, NORESCO shall provide the agenda for the training for Contractor's review and approval. NORESCO shall generate a sign-in sheet for the training, collect attendee information and provide the above to Customer within one (1) week of training date. Training shall be scheduled after commissioning is complete. Minimum training shall include the following:
    a. Explanation of drawings and O&M manuals.
    b. Walk-through of the Project to locate equipment and control components.
    c. Operator control functions and field panel programming.
    d. Explanation of adjustment, calibration, and replacement procedures.
    e. Explanation of override procedures.
    f. Student binder with training modules.
2. NORESCO shall provide documentation and training covering the operation and maintenance of the installed systems. The documentation shall cover, but is not limited to, the following:
    a. Review O&M of all equipment
    b. Troubleshooting of all newly installed equipment.
    c. Provide overview of scheduled preventive maintenance.
    d. Provide overview of non-scheduled maintenance.

e. Repair procedures.
f. Emergency shutdown procedures.
g. Warranty procedures and contact information.
h. Walk-through and system component identification.

ENVIRONMENTAL ISSUES

Energy savings from this measure will reduce associated power plant and on-site boiler emissions by reducing boiler fuel consumption by providing thermal and electrical energy to the campus. There would be no changes in the current onsite emissions permit.

EQUIPMENT INFORMATION

The waste heat recovery hot water generators will be manufactured by Kickham Boiler. Model number ECXW-4480-1.5.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

ECM 2 HIGH TEMP HOT WATER (HTHW) SYSTEM EFFICIENCY IMPROVEMENTS

OVERVIEW

Northeastern Illinois University operates 3 large forced-draft dual-fuel boilers serving heating hot water and domestic hot water loads for most buildings on campus. The units supply high temperature hot water (HTHW) at about 300 ^{o}F. Three circulating pumps distribute the HTHW to the buildings. Improvements evaluated for the high temperature hot water system include:

Figure 1: Forced Draft Boiler

2.1 New HTHW Boiler Controls

Northeastern Illinois University (NEIU) operates 3 large forced-draft natural gas boilers in Chicago, Ill. The units are 300F high temperature hot water (HTHW) system in the Central Energy Plant, Building H. Existing modulating burners utilize existing O_2 trim controls to match combustion air volume to fuel volume. Currently, the existing O_2 trim controls are inadequate in controlling stack O_2% levels and have been partially abandoned. When fuel and air are not ideally matched, energy is wasted in the combustion process because excessive air is heated in the boiler and exhausted with the flue gas

NORESCO has evaluated installing new oxygen (O_2) trim controls, and remove the existing O_2 trim controls, to automatically optimize fuel and air ratios at all firing rates to improve boiler efficiency and conserve fuel.

2.2 HTHW Pump VFDs

Figure 2: HTHW Pumps

NORESCO evaluated retrofitting the existing constant volume (CV) high temperature hot water (HTHW) pumping system to a variable volume pumping system. This retrofit would be accomplished by installing variable frequency drives (VFDs) on the existing HTHW pumps which will modulate the pump flow based on feedback from temperature sensors installed on the main HTHW supply and return. This will significantly reduce the energy consumed by the pump motors and will better match buildings' heating loads during unoccupied and mild conditions. During the course of the Investment Grade Audit, NORESCO contacted the boiler manufacturer to discuss this measure. Volcano representative stated that it is not recommended to vary the flow through the existing boilers. Therefore, NORESCO has not recommended the HTHW variable flow conversion.

2.3 HTHW Pump Seal Cooling Water Re-circulation

Figure 3: Fluid Cooler Courtesy of McQuay

NORESCO evaluated installation of a dry cooler on the roof above the boiler room and a closed loop glycol cooling system to provide seal cooling for the three HTHW pumps and the two generator secondary heat recovery pumps. The pumps currently use 'once through' cooling utilizing domestic water. The new glycol loop will eliminate the need to dump domestic water to the drain continuously in order to provide cooling for pump seal housing. This will result in reduced cost and wasted energy.

2.4 HTHW Pipe Insulation

NORESCO proposes installation of removable insulating jackets on the HTHW expansion joints, valves, fittings and pump components. Fiberglass insulation will be installed on exposed pipe and the HTHW heat exchanger in the Science building basement mechanical room that is connected to the utility tunnel.

DETAILED DESCRIPTION

2.1 New HTHW Boiler Controls

Existing System Description

The existing boilers, two International Volcano TJW-C units and one International LaMont TWJ-140 unit, in the Central Energy Plant are forced-draft boilers with variable firing rates. The fuel air mixture is controlled by an existing Century Controls O_2 trim controller. Currently, the existing O_2 trim controls do not adequately respond to stack O_2 levels and have been partially abandoned. NORESCO performed combustion tests on January 5, 2010 to January 7, 2010 at various load conditions. The testing determined that stack dry O_2 percentages were as high as 15.1%.

Results from January Combustion Test

	Dry O2 Percentage	Boiler	Boiler Load
Test 1	5.5%	1	low
Test 2	9.6%	2	80%
Test 3	15.1%	2	97%
Test 4	8.9%	2	70%
Test 5	14.7%	3	90%

The boiler load was than associated with a dry O_2 percentage. A curve fit was used to match existing boiler loads to predicted dry O_2 levels. ASME PTC 4.1, a protocol for determining

boiler efficiency was than used calculate the boiler efficiencies for each month on a weighted average.

Stack O_2 levels exceed the set on the O_2 trim control. When there is more air in the exhaust gas than necessary, extra energy is consumed to heat the excess air, which is then discharged up the stack. The lack of optimal air and fuel mixing under all firing conditions results in additional energy consumption without delivering more heat to the working fluid (hot water).

Based on the strong diurnal profile found in the hourly electrical usage, NORESCO determined that an hourly load profile would be required to correctly establish average monthly boiler loads. NORESCO collected hourly fuel usage for both weekday and weekend usage. The hourly fuel usage logs were used to create an hourly profile and establish monthly weighted average boiler efficiency based on the results of the combustion testing.

Proposed Scope of Work

NORESCO will remove the existing O_2 trim controls and install (3) new oxygen trim controls to the existing boilers in the Central Energy Plant. The trim control package includes a boiler stack oxygen sensor, connecting cables, and a fuel: air ratio controller that monitors the stack oxygen continuously, interfaces with the temperature controls, and continuously adjusts the combustion air flow in coordination with the fuel valve to optimize the mix of fuel and air.

1. Overview

Under a Performance Contract, NORESCO will perform an energy cost reduction improvements for Northeastern Illinois University (NEIU). Among the planned improvements is installation of O_2 trim controls for three high temperature (300F) hot water boilers (two International Volcano TJW-C units and one International LaMont TWJ-140 unit) at the Central Energy Plant. These controls will regulate fuel/air ratios on the boilers for maximum combustion efficiency, and will include variable frequency drives (VFDs) on the forced-draft fans to provide precise control of boiler combustion air. NORESCO proposes to trim the stack O_2 levels to 5% by volume when measure on a wet basis.

2. Project Location

Central Plant, Building H, at Northeastern Illinois University,

Scope of Work

1. Mechanical Demolition / Removal: NORESCO shall demolish and remove the following existing equipment and piping
    1. FD Fan Damper drives on each HWB.

2. Electrical/Instrumentation Demolition/Removal: NORESCO shall demolish and remove the following existing instrumentation and electrical systemsO2 Control Panel
    1. All wiring to/from O2 Panel
    2. O2 Analyzers

3. Mechanical New Work Installation: NORESCO shall furnish and install complete and functional systems in accordance with Owner and Contractor approved final design submittal documents specifications and drawings.
   1. Install new O2 Analyzers in the breeching of each HWB.
   2. Install new Damper Drive for each FD Fan damper.
   3. Provide new pressure sensors

4. Electrical/Control New Work Installation: NORESCO shall furnish and install complete and functional systems in accordance with Owner and Contractor approved final design submittal documents specifications and drawings.
   1. Install new O2 Control Panel to control O2 levels in the HWB flue gas to 5% by volume wet.
   2. Control panel to have O2 Trim Control Modules with 8-inch color touch screen display.
   3. New wiring between all new O2 Trim components installed in existing conduits.

O2 Trim System shall be a Century Model #CC-600--3-SH-B-L-2-AA-LMV/VSD.

Execution

1. Install controls, and oxygen analyzers in accordance with manufacturer's recommendations.
2. Locate oxygen analyzers and thermocouples in boiler exhaust stacks in accordance with manufacturer's recommendations.

Training

1. NORESCO shall provide one (1) four (4) hour session of on-site training on the various pieces of equipment and systems that NORESCO has installed as part of its Work. One week prior to the scheduled training, NORESCO shall provide the agenda for the training for customer's review and approval. NORESCO shall generate a sign-in sheet for the training, collect attendee information and provide the above to customer within (2) weeks of training date. Training shall be scheduled after commissioning is complete. Minimum training shall include the following:
   a. Explanation of drawings and O&M manuals.
   b. Walk-through of the Project to locate equipment and control components.
   c. Operator control functions and field panel programming.
   d. Explanation of adjustment, calibration, and replacement procedures.
   e. Explanation of override procedures.
   f. Student binder with training modules.
2. NORESCO shall provide documentation and training covering the operation and maintenance of the installed systems. The documentation shall cover, but is not limited to, the following:
   a. Review O&M of all equipment
   b. Troubleshooting of all newly installed equipment.

c. Provide overview of scheduled preventive maintenance.
d. Provide overview of non-scheduled maintenance.
e. Repair procedures.
f. Emergency shutdown procedures.

Commissioning of the O_2 Trim Controls will include the following:

- Inspection and test of oxygen sensor and thermocouple installation, and verification of proper location
- Inspection and test of all sensor and electrical connections
- Test of valve modulation and burner fan speed control
- Monitoring of variables under a range of operating conditions to verify proper fuel:air ratio control
- New O2 Control Panel to control O2 levels in the HWB flue gas to 5% by volume wet.

2.2 HTHW Pump VFDs

Existing System Description

Three 40 HP, 600 gpm CV process pumps, one of which is a stand-by unit, circulate the high temperature hot water (HTHW) to remote heat exchangers located in various buildings throughout the campus. Secondary hot water loops are connected to the heat exchangers and provide hot water to various HVAC equipment in each building such as air handling units, induction units, baseboard heaters, and zone reheat coils. The HTHW system also heats domestic water through heat exchangers located in various buildings throughout campus. The HTHW system is available all year round, therefore requiring the process pumps to operate continuously throughout the year. With the existing constant volume pumping systems the volume of water moving through the pumps is constant regardless of the heating load. Therefore, the power consumption of the pumps is also constant.

Proposed Scope of Work

NORESCO evaluated converting the existing HTHW pumping system from constant volume to variable volume in order to minimize the amount of pumping energy consumed by the main pumps. To allow pump speed, and therefore energy consumption, to modulate based on thermal loads on the system, we would install VFDs on the pump motors and temperature sensors on the main HTHW supply and return lines. We would connect the drives and sensors to the energy management control system (EMCS) and use feedback from the temperature sensors to control the speed of the pump motor. The new VFDs would modulate pump speed to maintain a constant 250°F (ADJ) return water temperature, reducing pump energy consumption under part-load conditions.
However, upon contacting the boiler manufacturer to discuss this measure, the Volcano representative stated that it is not recommended to vary the flow through the existing boilers. Therefore, NORESCO does not recommend implementing this ECM.

2.3 HTHW Pump Seal Cooling Water Re-circulation

Existing System Description

Pumps P5 and P6, located in the cogen room, are secondary pumps for the Cogen heat recovery loop. They are inline centrifugal pumps with 30 HP motors. They are rated for 1,482 GPM at 50 head feet. The three HTHW pumps and pumps P5 and P6 all have once through cooling for the seal housings. The cooling water passes through the pumps continuously and discharges to a drain, wasting a significant volume of domestic water.

Proposed Scope of Work

Figure 4: Cogen Heat Recovery Secondary Pumps

NORESCO proposes to install a fluid cooler on the roof of the H building boiler room. A 30 gallon expansion tank will be provided and installed along with all piping and insulation required. The glycol cooling system will include an inline pump delivering 15 GPM to the three 40 HP primary HTHW pump jackets and the two cogeneration secondary heat recovery pumps P-5 and P-6 seal jackets.. The scope of work for this measure will include:

i. Provide and install one 7.5 ton fluid cooler on the roof.
ii. Provide and install one 30 gallon expansion tank and all piping required to complete the cooling loop from the fluid cooler to the tank and five pumps.
iii. Insulate piping with fiberglass insulation
iv. Provide and install electrical service, starter, controls, wiring and tie into existing energy management system.

2.4 HTHW Pipe Insulation

Existing System Description

The HTHW is delivered to the building through utility tunnels. NORESCO surveyed the utility tunnels with facility personnel and found that there are numerous un-insulated pipe sections, expansion joints, valves and fittings in the tunnels as well as some of the building mechanical rooms connected to the tunnels. There are also some chilled water fittings that are not insulated in a few areas. The areas surveyed and components requiring insulation are summarized in table 1 below. Sample photographs of the piping and components that require insulation is presented in table 2 below.

Table 1 Tunnel and Mechanical Areas Surveyed for the Insulation ECM

Area Description	Description of Components to be Insulated
Tunnel Area E Building	4" HTHW bypass piping
Building D South Corridor	(2) HTHW expansion joints
LWH Mechanical Room 0004	(2) Control Valves
Student Union Mechanical Room 109	Domestic hot water heat exchanger
	22-1/2" converter piping
	12" O.D. converter flange
	Perimeter converter and flange insulation repair
Student Union Tunnel	(2) HTHW expansion joints
	(1) Chilled water and (1) HTHW valves
Science Building Tunnel	Chilled water and hot water valves (4) total & (2) Blanks
	(4) HTHW expansion joints
Science Mechanical Room (Off Tunnel)	(2) HTHW expansion joints
	one section of 8" pipe
	2-1/2" bypass piping
	New converter (ECM 4.8.3) and an 8" flange
Tunnel between Student Union and Main	(4) HTHW expansion joints
	(2) chilled and (2) HTHW valves
Y section of Tunnel	(2) Chilled and (2) Hot water flanges
Library Tunnel	(4) HTHW expansion joints
Tunnel to Parking Facility	(2) 4" HTHW pipe and (2) 4" flanges
Library	(2) 8" flanged reducers
	PRV valve arrangement consisting of (6) flanged valves total
Main Tunnel	(2) HTHW expansion joints
Building H	(3) HTHW pump assemblies including pipe, valves, fitting and base mounted pumps.

Table 2: Sample Photographs from Tunnel Survey

Tunnel Area E Building			
Building D South Corridor			
LWH Mechanical Room 0004			
Student Union Mechanical Room 109			
Student Union Tunnel			

Science Building Tunnel			
Science Mechanical Room (Off Tunnel)			
Tunnel between Student Union and Main			
Y section of Tunnel			
Library Tunnel			

Tunnel to Parking Facility			
Library	 		
Main Tunnel			
Building H			

Proposed Scope of Work

NORESCO proposes to insulate the deficient areas described in the section above. This includes a total of twenty (20) HTHW expansion joints NORESCO to provide and install the following:

- HTHW expansion joints will be insulated with removable blankets using 16 oz./ sq. yd. Silicone impregnated fiberglass cloth as the outer jacket, with 1.000" thick 11 # density "E" type material. The jackets will be mechanically bound and secured with belts made from outer jacketing cloth with stainless steel double D-ring Drawstring flaps with Nomex cord.
- Other pipe and fitting will be insulated with fiberglass and factory all service jacket. The thickness will match existing.
- Areas and pieces insulated as described in this section

Table 3 : Insulation ECM areas to be insulated

Area Description	Description of Components to be Insulated
Tunnel Area E Building	4" HTHW bypass piping
Building D South Corridor	(2) HTHW expansion joints
LWH Mechanical Room 0004	(2) Control Valves
Student Union Mechanical Room 109	Domestic hot water heat exchanger
	22-1/2" converter piping
	12" O.D. converter flange
	Perimeter converter and flange insulation repair
Student Union Tunnel	(2) HTHW expansion joints
	(1) Chilled water and (1) HTHW valves
Science Building Tunnel	Chilled water and hot water valves (4) total & (2) Blanks
	(4) HTHW expansion joints
Science Mechanical Room (Off Tunnel)	(2) HTHW expansion joints
	one section of 8" pipe
	2-1/2" bypass piping
	New converter (ECM 4.8.3) and an 8" flange
Tunnel between Student Union and Main	(4) HTHW expansion joints
	(2) chilled and (2) HTHW valves
Y section of Tunnel	(2) Chilled and (2) Hot water flanges
Library Tunnel	(4) HTHW expansion joints
Tunnel to Parking Facility	(2) 4" HTHW pipe and (2) 4" flanges
Library	(2) 8" flanged reducers
	PRV valve arrangement consisting of (6) flanged valves total
Main Tunnel	(2) HTHW expansion joints
Building H	(3) HTHW pump assemblies including pipe, valves, fitting and base mounted pumps.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

Work on HTHW system components will need to be coordinated with one of the two annual HTHW system shut-downs.

Oxygen trim controls will maintain proper fuel:air mixture under all firing rates, providing cleaner burning of the fuel and more efficient combustion. Annual adjustment of the fuel:air mixture will no longer be required, although actuators and linkages should still be checked for proper operation as well as the oxygen sensors in the stack. Continuous oxygen trim control will eliminate the need for annual tuning of the fuel:air mixture. The boilers will continue to operate to deliver the water temperature or steam pressure set in the operating controls. The oxygen sensor should be periodically checked for accurate reading.

ENVIRONMENTAL ISSUES

Hazardous Materials

Abatement of hazardous materials including asbestos will be the responsibility of Northeastern Illinois University. The piping, fittings and valve insulation and piping joints may contain asbestos. The asbestos containing materials must be identified and abated prior to any work in these areas.

Environmental Benefits

Reducing the amount of electrical and thermal energy consumed by the central plant boilers an distribution system will positively impact the environment by reducing the emission byproducts of electrical and thermal energy generation processes.

EQUIPMENT INFORMATION

2.1 New HTHW Boiler Controls

The O_2 trim controls will be as manufactured by Century Controls, including the following components for each boiler:

- Controller in enclosure with relays, fuses, and termination strips
- Oxygen analyzer with mounting kit, calibration gas tubing, and connecting cable
- Flue gas thermocouple with mounting kit and connecting cable
- Actuator with position feedback, mounting bracket and connecting linkage

2.3 HTHW Pump Seal Cooling Water Re-circulation

Design based on McQuay AFS008 Fluid Cooler

2.4 HTHW Pipe Insulation

Silicone coated fiberglass fabric to be Alpha Matrix Associates Type 3201-2-SS or approved equal.

Type “E” Fiberglass Mat manufactured by
Lewco Specialty Products, Inc.
6859 Renoir Ave.
Baton Rouge, LA 70806 or approved equal

Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

ECM 3 CHILLER PLANT EFFICIENCY IMPROVEMENTS

OVERVIEW

The Northeastern Illinois University (NEIU) central plant provides chilled water (CHW) to eleven buildings on the NEIU campus. They include: A; B; C; D; E; F; Lech Walesa Hall; Fine Arts; Library; Science; Student Union buildings.

Two centrifugal chillers located in the Building H Mechanical Equipment Room (MER) generate the CHW for the central system. The CHW is pumped from the MER to the air handling units in each campus building through a system of insulated chilled water distribution piping located in the underground pedestrian walkways between the campus buildings. Each campus building air handler maintains the summer cooling space temperature in the areas of each building they serve.

The central CHW system is operated from the spring through the fall seasons of the year and is shut down during the winter season. In the beginning of the winter season, as part of the CHW plant shut down, the condenser water is drained from the system and the condenser water piping is coated with a rust preventative.

NORESCO began the detailed energy audit just prior to chiller plant seasonal shutdown last fall. We pressed to get as many system measurements as we could by extending the operation of the chiller plant for a couple of weeks. However, a better analysis could be conducted when the plant is under full load next summer.

Based on review of chiller log data and the system measurements that were performed: a) the base load chiller operates about 1500 hours per year and a second chiller is needed for only about 250 hours per year; b) the condenser pumps are undersized and c) only one chiller water pump is run all year. These conditions result in very limited energy savings opportunities regarding the chiller plant

The following energy conservation measures (ECMs) were evaluated during the investment grade audit.

3.1 Chiller Compressor VFD

NORESCO evaluated installing a VFD on Chiller 2, Carrier Model 19XR-7776576ENS68 located on the left side when facing the chillers from the control room. This will result in greater part load chiller efficiency and reduced energy consumption.

3.2 Chiller Visor Controls

NORESCO evaluated Carrier ChillerVisor controls and tie into the iNet system. This will result in reduced energy use due to optimized chiller plant control algorithms. In lieu of the ChillerVisor controls, we also evaluated chiller plant control upgrades with the iNet system described in ECM 6: Control System Upgrades.

3.3 Chilled Water Distribution System Improvements

The primary chilled water system in the central plant currently provides marginal flows while operating a single pump regardless of the number of chillers in operation. Reportedly, two pumps cannot be operated without serious vibration problems. With the operation of only one pump there isn't much opportunity for energy savings in chilled water pumping system. And because of the identified operational issues we cannot recommend any energy conservation measures for the chilled water pumping system. I tmay be prudent to conduct an engineering study of the CHW distribution system during next cooling system. ECMs that were considered included:

- Variable Primary Chilled Water System
- Primary / Secondary Chilled Water System
- Trim Chilled Water Pump Impellers

3.1 New Condenser Water Pumps and Filtration System

NORESCO proposes to replace the four (4) existing condenser water pumps with new pumps capable of delivering a higher pressure and installing a filtration system to remove the scale that is prevalent throughout the condenser water system. This will allow delivery of design flows to the two Carrier chillers and help reduce the amount of debris traveling through the system.

DETAILED DESCRIPTION

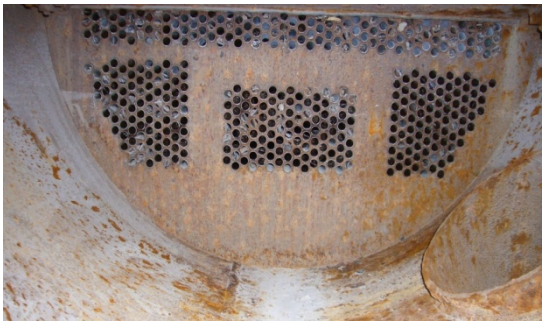
Figure 1: Central Plant Cooling Tower

The existing chilled water plant that serves the main campus consists of two centrifugal chillers, three chilled water pumps, four condenser water pumps, and a two cell cooling tower. The chillers, rated at 1,250 ton each, are water cooled, constant speed, Carrier centrifugal chillers and are approximately ten years old. One chiller lost a wheel (broke apart) during normal operation on 10/15/03. This chiller indentified as Carrier model 19XR-7776576ENS68, serial number 1200Q632833.2 was partially torn down and a 'new style' impeller wheel, inner/outer diffuser and labyrinth were installed. The other chiller is the same make and model but has the original style impeller wheel and diffusers installed. The original style components are not compatible with the varying load of a compressor VFD.

A two cell Baltimore Air Coil (BAC) cooling tower, sized for the two existing chillers is located on the roof of the MER above the chillers. Steel condenser piping installed in 1973 carries the condenser water between the tower and chillers with two parallel pumps for each of the two

Figure 2: Condenser Barrel

chillers in the line-up. During the original design, two additional pumps were installed to serve as backup of the other two pumps. However, the existing condenser water system pressure exceeds the design head of the condenser water pumps which forces NEIU to run all four pumps. This leaves the plant with no backup pump in case of a failure of one of the pumps.



During our site investigation, the facilities group had the condenser head off of one of the chiller condenser barrels and a diffuser plate off of one of the condenser water pumps. There was a significant amount of loose scale flakes in the inside of both pieces of equipment. There was a gray film coating on the scale. We met with the facilities water treatment representative and he indicated that NEIU improved the treatment program about two years ago and that the scale has actually reduced since they have been treating with inhibitors before the season system shutdown. They put a rust preventative coating in the condenser water when they drain the system in the winter.

Three primary chilled water pumps, which deliver chilled water to the north side of the campus, are rated at 2,500 gallons per minute and 200 feet of head. They are cross connected in parallel and have a common bypass so that each pump can serve either chiller. The original design of the chiller plant was to operate one pump with one chiller or two pumps with both chillers as the third pump remains a backup pump. This configuration would result in twelve degree delta T in peak conditions. Our conversations with NEIU maintenance personnel and review of chiller logs show that only one pump is operational regardless of the number of chillers running. Northeastern Illinois University has not been able to run the system with two primary chilled water pumps operating simultaneously since they were installed. If two chilled water pumps are run at the same time the building shakes as described by facility personnel. In addition, during our survey we noticed that a chilled water butterfly valve, located downstream of the pumps, is throttled down to half-closed position (position 1) when one chiller is operating and turned back up to approximately 2/3 open (position 2) when both chiller are online. NEIU personnel stated that if the valve is in fully opened position with a single chiller running, there is more chilled water flow going to the chiller than needed. Our short term flow measurements showed approximately 3,000 gallons per minute constant flow with the valve set to position 1 which re-enforces this statement. In addition to the short term flow measurements, we reviewed hourly chiller logs for the 2008-2009 period provided to us by NEIU. The logs showed that the two chillers are online simultaneously for only about 250 hours out of approximately 1,500 hours of chiller plant operation per year. Each campus building served by the central CHW system has booster pumps. Some of the booster pumps have been turned off. Downstream of the booster pumps, the CHW system piping terminates at the air handlers in one of eight different control valve and coil pump configurations.

Table 1: Chilled Water System Summary; shown below, summarizes the cooling coil loads, coil and booster pump operations for the primary chilled water pumping system.

Table 2: Chilled Water System Summary

NEIU CHILLED WATER SYSTEM DATA - 11-23-2009																				
BUILDING	LOCATION	AHU UNIT	CHW PIPIE SIZE (")	GPM	BLDG GPM	COIL DETAIL	EWT	LWT	CHILLED WATER PUMPS										
									PUMPS	RUN	TAG	TYPE	MANUF	HP	RPM	GPM	HD (feet)	USE	
LIBRARY	LOWER LEVEL	S-1	6	300		A	44	54											
	LOWER LEVEL	S-2	6	295		A	44	54											
	LOWER LEVEL	S-3	4	205		A	44	54											
	PENTHOUSE	S-4	3	115		A	44	54											
	PENTHOUSE	S-5	4	163	1078	A	44	54											
	LOWER LEVEL								YES	NO	1	ES	B&G	30	1760	NA	NA	CHW	
	LOWER LEVEL								YES	NO	2	ES	B&G	30	1760	NA	NA	CHW	
SCIENCE	ROOM 118	S-1	4	366		B	na	na											
	PENTHOUSE 2 (WEST)	S-2	4	380		B	na	na											
	PENTHOUSE 1 (EAST)	S-3	3	144		B	na	na											
	PENTHOUSE 2 (WEST)	S-4	4	338		B	na	na											
	PENTHOUSE 1 (EAST)	S-5	4	235		B	na	na											
	3RD FLOOR	S-6	3	132	1595	B	na	na											
	BASEMENT								YES	YES	1	ES	TACO	10	1750	410	55	CHW	
	BASEMENT										2	ES	TACO	10	1750	410	55	CHW	
FINE ARTS	BASEMENT	AHU-1	4	168		A	42	52											
	BASEMENT	AHU-2	2.5	133		A	42	52											
	BASEMENT	AHU-3	5	314		A	42	52											
	BASEMENT	AHU-4	5	300		A	42	52											
	2ND FLOOR RM 219	AHU-5	2	40		A	42	52											
	2ND FLOOR RM 250A	AHU-6	3	69		A	42	52											
	2ND FLOOR RM 206	AHU-7	2	35		A	42	52											
	2ND FLOOR RM 215C	AHU-8	2.5	57		A	42	52											
	2ND FLOOR RM 212	AHU-9	2	27		A	42	52											
	2ND FLOOR RM 252A	AHU-10	2	40		A	42	52											
	1ST FLOOR RM G114E	AHU-11	2.5	60		A	42	52											
	BASEMENT	AHU-12	2.5	54		A	42	52											
	2ND FLOOR RM 219	AHU-13	2.5	62		A	42	52											
	1ST FLOOR RM G112A	AHU-14	5	116		A	42	52											
	2ND FLOOR RM 225E	AHU-15	2.5	56		A	42	52											
	1ST FLOOR RM G114A	AHU-16	2.5	49		A	42	52											
	1ST FLOOR RM G114C	AHU-17	2	14	1594	A	42	52											
	BASEMENT								YES	NO	P2	VSCS	B&G	60	1785	1577	112	CHW	
	BASEMENT								YES	NO	P2-A	VSCS	B&G	60	1785	1577	112	CHW	
STUDENT UNION	LOWER LEVEL ROOM 019	AHU-1	4	260		H	44	54											
	1ST FL ROOM 114	AHU-2	4	260		H	44	54											
	2ND FL ROOM 220	AHU-3	4	260		H	44	54											
	2ND FL ROOM 203	AHU-4	5	260		na	44	54											
	1ST FL ROOM 102	AHU-5	3	53		na	44	54											
	2ND FL ROOM 212	AHU-6	2.5	50	1143	na	44	54											
	BASEMENT								YES	NO	1	ES	B&G	25	NA	800	90	CHW	
CLASS ROOM	MECH RM UPPER LEVEL	VS-1	4	104		C	na	na			VS-1	INLINE	B&G	NA				CHW	
	MECH RM UPPER LEVEL	VS-2	4	112		C	na	na			VS-2	INLINE	B&G	NA				CHW	
	MECH RM UPPER LEVEL	VS-3	4	140		C	na	na			VS-3	INLINE	B&G	NA				CHW	
	MECH RM UPPER LEVEL	VS-4	4	136		C	na	na			VS-4	INLINE	B&G	NA				CHW	
	MECH RM UPPER LEVEL	VS-5	3	82		C	na	na											
	MECH RM UPPER LEVEL	VS-6	2	28		C	na	na			VS-6	INLINE	B&G	NA				CHW	
	1ST FLOOR	na	4	108		na	na	na											
	2ND FLOOR	na	4	108		na	na	na											
	3RD FLOOR	na	4	108	926	na	na	na											
	BASEMENT								YES	YES	P-3	ES	B&G	7.5	1755	376	50	CHW	
	BASEMENT								YES	YES	P-4	ES	B&G	7.5	1725	376	50	CHW	
BUILDING A	BASEMENT	A-1	6	330	330	G	na	na	YES	NO	P-3	ES	B&G	7.5	1760	330	50	CHW	
BUILDING B	BASEMENT	AHU-1	6	315	315	I	na	na											
	BASEMENT								YES	YES	P-3	ES	TACO	5	1750	315	40	CHW	
	BASEMENT										P-4	ES	TACO	5	1750	315	40	CHW	
BUILDING C	BASEMENT	C-1	6	325	325	C	44	54											
	BASEMENT								YES	YES	CHWP-1	ES	TACO	7.5	1750	321	40	CHW	
	BASEMENT										CHWP-2	ES	TACO	7.5	1750	321	40	CHW	
BUILDING D	BASEMENT	D-1	5	327		E	44	54	YES	NO	1	ES	B&G	3	na	na	na	CHW	
	BASEMENT	H-1	2	24		E	45	55			2	INLINE	B&G	NA	na	na	na	CHW	
	BASEMENT	D-3	2	24	375	G	na	na			3	INLINE	B&G	NA	na	na	na	CHW	
BUILDING E	?	E-1	4	260		E	na	na											
	BASEMENT	E-2	4	260		E	44	54			na	ES	B&G	3	1750	266	29	CHW	
	BASEMENT	E-3	2	47		E	na	na											
	?	E-4	3	135		E	na	na	YES	NO	na	na	na	na	na	na	na	na	
	?	E-5	2	47		E	na	na			na	na	na	na	na	na	na	na	
	BASEMENT	E-8	2	47		F	na	na			na	INLINE	B&G	0.5	na	na	na	CHW	
	BASEMENT	E-9	2	47	843	F	na	na			na	INLINE	B&G	0.75	na	na	na	CHW	
BUILDING F	BASEMENT	F-1	4	260	260	E	na	na	YES	NO	1	ES	B&G	3	1735	NA	NA	CHW	
CHILLER MER	CHW								YES	YES	5	HSC	AMST	200	1785	2500	NA	CHW	
	CHW								YES	YES	6	HSC	AMST	200	1785	2500	NA	CHW	
	CHW								YES	YES	7	HSC	AMST	200	1785	2500	NA	CHW	
	CW								YES	YES	1	VSC	B&G	40	1760	1800	60	CW	
	CW								YES	YES	2	VSC	B&G	40	1760	1800	60	CW	
	CW								YES	YES	3	VSC	B&G	40	1760	1800	60	CW	
	CW								YES	YES	4	VSC	B&G	40	1760	1800	60	CW	
		TOTAL BUILDING GPM			8,784				TOTAL CHW PRIMARY PUMP GPM					5,000					

NOTES:
1. Chw coil gpms were taken from a recent NEIU dwg schedule.
2. The blue shaded gpms are flows that have been estimated from a similar sized CHW pipe identified in the NEIU drawing schedule.
3. The yellow gpms are flows that have been estimated from the capacity of the building pump.

CHW COIL DETAIL DESCRIPTION
- A - Stacked coils with a 3-way CV.
- B - Stacked coils with a recirculating pump (R to S) and no CV.
- C - Stacked coils with decoupler pipe, 3-way CV and pump.
- E - Side-by-side coil with 3-way CV and booster pump.
- F - Single coil with booster pump and a 3-way CV.
- G - Stacked coils with booster pump and no CV.
- H - Stacked coils with 2-way CV and no coil pump.
- I - Stacked coils with 2-way CV, decoupler pipe and pumps.

LEGEND:
- ES - End Suction
- VSCS - Vertical Split Case
- MER Mechanical Equipment Room
- CHW - Chilled Water
- CW - Condenser Water
- AMST - Armstrong
- HSC - Horizontal Split Case
- CV - Control Valve
- na - Not Available

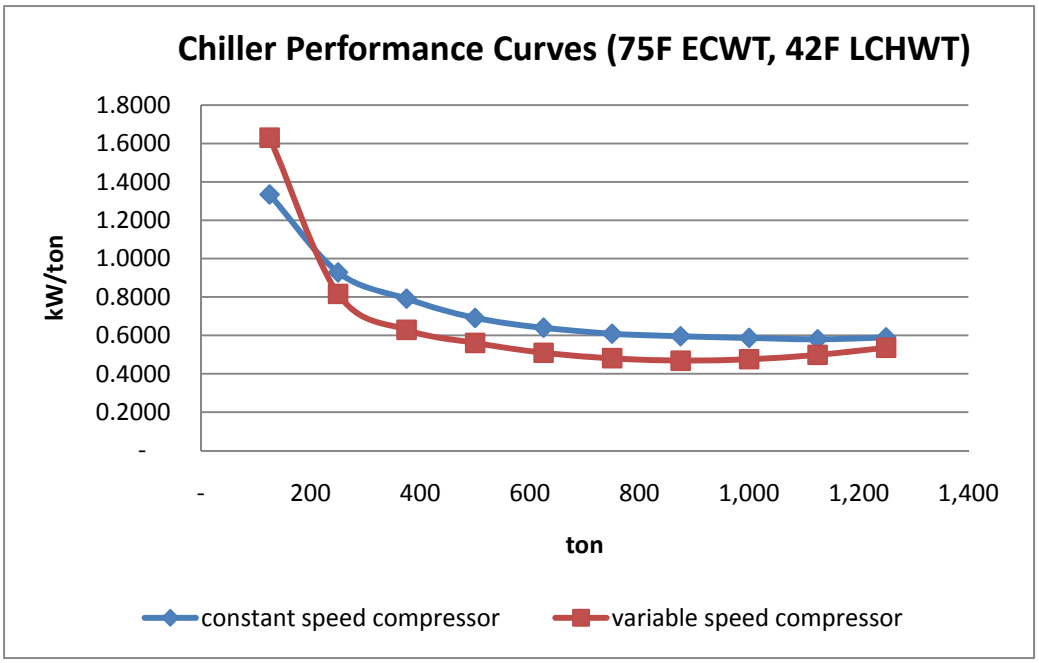
EVALUATED MEASURES

NORESCO evaluated a number of improvements to the chiller plant which are described below.

3.1 Chiller Compressor VFD

Addition of a VFD to the chiller that has a new style impellor and diffusers was evaluated by NORESCO. The energy consumption associated with chillers can be reduced by installing a variable frequency drive (VFD) on the chiller's compressor. The VFD will allow the chiller to achieve the most efficient part load performance possible by accurately matching the chiller's motor performance to the actual cooling load requirement. In lieu of energy savings, the integrated VFD will provide a soft start, further reducing stress on the compressor and inrush current at start-up. This will result in improved reliability and longer equipment life. Implementation of this ECM would require that the chiller with the compressor motor VFD be utilized as the lead chiller in order to capture the energy savings available. Addition of a VFD to the second chiller would require a partial tear down to install the 'new style' impeller wheel, inner/outer diffuser and labyrinth.

Performance curves, which were obtained from the chiller manufacturer, for 75 ºF entering CW temperature and 42 ºF leaving CHW temperature are shown below to illustrate the efficiency gain from installing VFD on the chiller compressor.



Following is an outline of the scope of work related to the Chiller Compressor VFD retrofit:

- Provide all of the labor and material to remove and dispose of the existing chiller #1 starter and appropriate chiller components. The University may elect to keep the starter and/or chiller components as spare parts for their existing machine.
- Provide and install all material and labor to retrofit the Carrier chiller #1 with a free standing Allen Bradley Variable Frequency Drive (VFD). Provide all chiller retrofit work, control interface wiring, controls and programming between the chiller and the VFD to optimize the operation of the chiller and minimize energy use in the plant.
- Provide and install all material and labor for the electrical installation of the new VFD for the above chiller. Replace the new VFD in the same general location as the existing starter (final location to be field determined) complete with power cable meg testing, new metering and any concrete equipment pad modifications required.

3.2 Chiller Plant Control Upgrade

The current chiller control system is somewhat outdated and has limited capabilities. Noresco evaluated using a Carrier Chillervisor control system but the economics were not viable. As an alternative we evaluated upgrading the existing controls with iNet 7 controls which will provide sophisticated multiple chiller, tower and pump control functions to optimize the efficiency of the chiller plant. The costs for iNet 7 chiller control upgrades are included in ECM 6: Control System Upgrades

Following is an outline of the scope of work related to the Chiller Plant Control Upgrade:

- Provide all labor and material to remove and dispose of any existing chiller control end devices that are not compatible with the new iNet 7 control system.
- Provide and install all materials and labor to retrofit the existing chiller control system with the iNet 7 control system, including but not limited to all hardware, software, wiring and customized control solutions required for a complete and functional system to optimize the performance and efficiency of the chiller plant.

3.3 CHW Distribution Improvements

NORESCO's engineers investigated several possible improvements to the chilled water distribution system at NEIU. Unfortunately, due to the deficiencies in the chilled water system described above and the lower than expected operating hours none of these can be recommended as viable measures. Preliminary flow measures were taken on the common chilled water supply line in the central plant at the end of the cooling season. The extent of the problems with the chilled water system were not identified until after the season. The system should be evaluated during the cooling season.

Based on the estimated AHU coil capacities in Table 1 the system has grown to an excess of 8,000 gallons per minute design capacity. Based on the flow we measured and the pump curve (figure 2 below) the flow out to the building with one chiller on and the valve throttled to approximately half closed (position 1) the flow is about 3,000 gallons per minute. Based on the curve the maximum flow achievable with the single pump is approximately 3,400 gallons per minute. The eQUEST model indicates that peak load as operated is about 1,700 tons. This would equate to roughly 3,400 gallons per minute at a 12 degree delta. It should be noted that this is what the system appears to be operating at based on chiller logs, some estimations and flows. This does not address individual building needs or if branch and total flows are sufficient. Although there is no potential for energy savings based measure, NEIU may want to address the system problems with an engineering study during the cooling season. First to determine the underlying reason two pumps cannot be utilized as designed and then if the individual branches to buildings are sized and balanced properly for design flows. NORESCO will assist NEIU in determining the best path forward and resources available if further pursuit is desired.

The ECMs considered are listed below.

Variable Primary Chilled Water Pumping

Currently, the primary chilled water pumps deliver constant flow to various buildings across the campus. We considered converting the constant volume primary loop to variable flow by installing a VFD on one of the chilled water pumps. Implementing this improvement will allow to slow down the pump and deliver proper amount of chilled water to the buildings without throttling the control valve. Reducing the flow rate in the pumping system by means of a VFD will result in significant amount of energy savings. Another benefit of installing a VFD would be an extended pump motor life. However, after reviewing the chiller logs for the 2008-2009 period, we noticed that the chiller plant operates around 1,500 hours per year which gives poor economics to the VFD retrofit.

Primary / Secondary Chilled Water Pumping

NORESCO also considered converting the chilled water system to a primary secondary system. This would allow constant flow through the chillers via the primary pumps and variable flow to the buildings utilizing the secondary pump with a VFD. Two-way control valves would be installed on the major coils to replace the existing three way valves and to allow regulated flow to coils such as the science building that do not have control valves now. This measure would require significant changes to the central plant piping and would not be cost effective.

Trim Pump Impellors

Another approach to improve the chilled water distribution system is to trim the existing pump impellor. Trimming the impellor will reduce the flow to the design value and will eliminate the extra head that is currently induced by throttling the CHW valve. This in turn will reduce the amount of energy consumed by the pump.

In order to evaluate this opportunity, we obtained the manufacturer performance curves of the existing pump. As it can be seen from the curve below, the current operating point of 3,000 gallons per minute and 14.2'' impellor size is near the end of the pump curve. Further reduction of the impellor diameter would not be feasible because the pump would operate outside the allowable range.

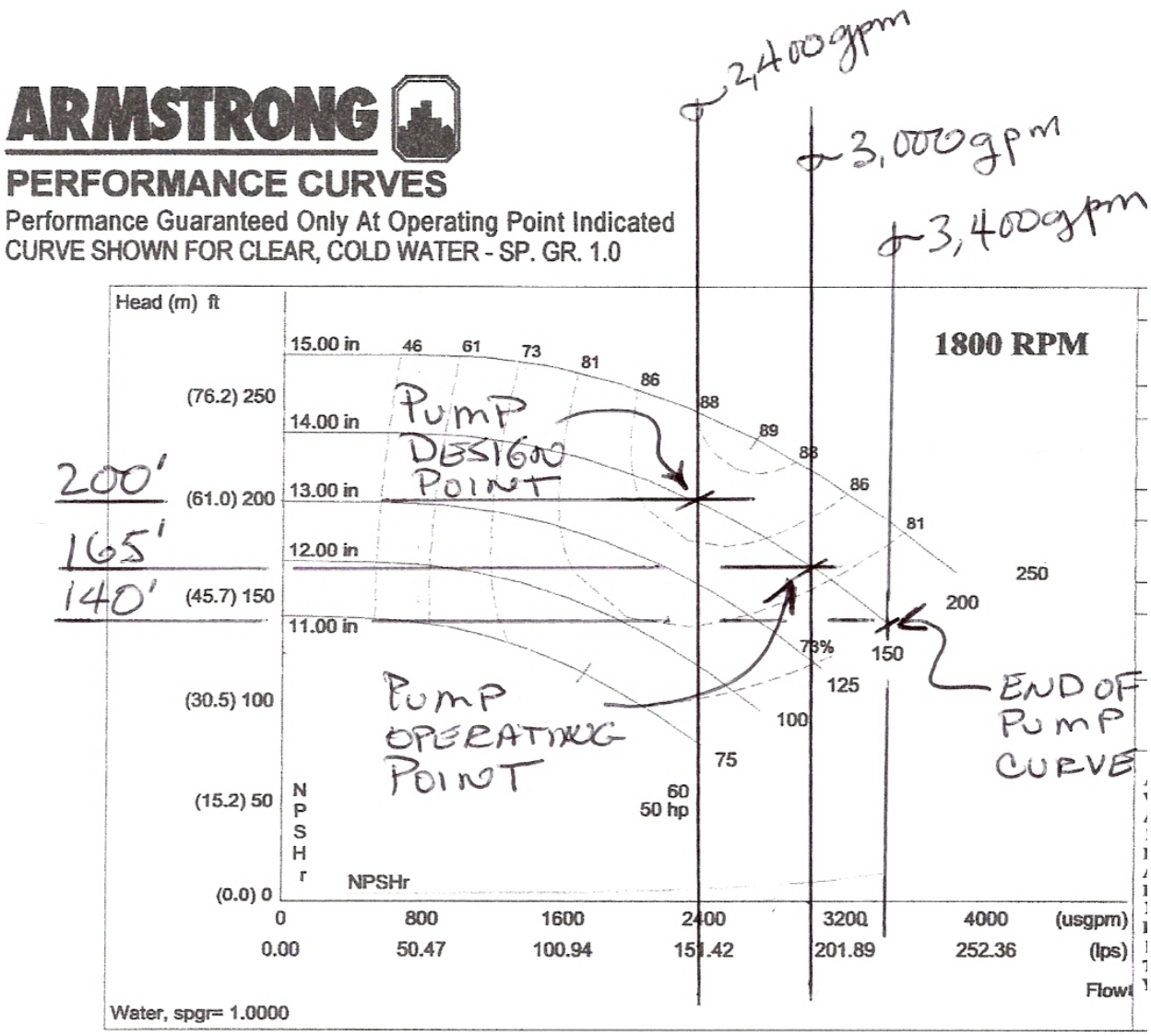


Figure 3: Chilled Water Pump Curve

3.4 New CW Pumps & Filtration System

NORESCO evaluated replacing the existing condenser water pumps with new pumps to match the flow and pressure requirements of the system. The existing pumps do not match the system pressure of the condenser water loop which forces NEIU personnel to bring additional pumps online. This leaves no backup pumps available in case of a failure. After the new installation, two of the four new pumps will suffice the load requirements and the other two will serve as backup.

Based on the observation of loose scale in the condenser water system we included installing a new filtration system on the condenser water loop to achieve a better performance and heat transfer in this ECM. Although the chiller condenser barrels are cleaned twice a season and an

adequate condenser water treatment program is in place now, additional condenser water filtration is needed to reduce the amount of residual rust in the steel condenser water pipes from collecting in the chiller condenser barrels and cooling tower sump.

Following is an outline of the scope of work related to the New CW Pumps & Filtration System:

- Provide all of the labor and materials to remove and dispose of the four (4) existing chiller condenser water pumps, disconnects, power wiring to the starter, starter heaters and circuit breakers.
- Provide all labor and materials to replace the existing four (4) chiller condenser water pumps with four (4) new pumps. Each pump shall deliver 1,600 gallons per minute at 90 feet of head.
- Provide all labor and Material for the electrical installation of the new condenser water pumps, including, but not limited to starter circuit breakers, starter heaters, power wiring from starter to pump, pump disconnects and EMT. Provide new starters if replacement components are not available for the existing starters.
- Provide all of the material and labor to install a pre-engineered 500 gallons per minute disc filter system (to be located in the MER) and a tower sweeper jet system (to be located in the BAC tower) to filter the condenser water.
- Provide all of the material and labor for the electrical installation of the filter system, including but not limited to starters for each of the two (2) filter pump motors, power wiring, EMT, disconnects and self contained controls for a complete and functional system.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

3.1 Chiller Compressor VFD

Special Installation Requirements

Work under this ECM will be done during normal working hours. The work will take place in mechanical spaces. NORESCO will coordinate all work with building maintenance personnel in an effort to minimize disruption to building occupants.

Special Operating and Maintenance Requirements

The VFD chiller will become the lead chiller and will be the primary chiller whenever a single chiller is running.

3.2 Chiller Plant Control Upgrade

Special Installation Requirements

Work under this ECM will be done during normal working hours. The work will take place in mechanical spaces. NORESCO will coordinate all work with building maintenance personnel in an effort to minimize disruption to building occupants.

Special Operating and Maintenance Requirements

NORESCO expects maintenance of the installed equipment to be comparable to requirements for typical chillers. Therefore, the new equipment will not have any special operating or maintenance requirements.

Special Installation Requirements

Work under this ECM will be done during normal working hours. The work will take place in mechanical spaces. NORESCO will coordinate all work with building maintenance personnel in an effort to minimize disruption to building occupants.

Special Operating and Maintenance Requirements

NORESCO expects maintenance of the installed equipment to be comparable to requirements for typical condenser pumps. Therefore, the new equipment will not have any special operating or maintenance requirements. The filtration system will reduce the need to clean scale and debris out of chiller barrels and pumps over time.

ENVIRONMENTAL ISSUES

Hazardous Materials

No hazardous materials are expected to be encountered during the implementation of these energy conservation measure.

EQUIPMENT INFORMATION

3.1 Chiller Compressor VFD

Design based on Allen Bradley Powerflex 7000 VFD or approved equal.

3.2 Chiller Plant Control Upgrade

Design is based on iNet 7 controls.

3.3 Chilled Water Pumping System

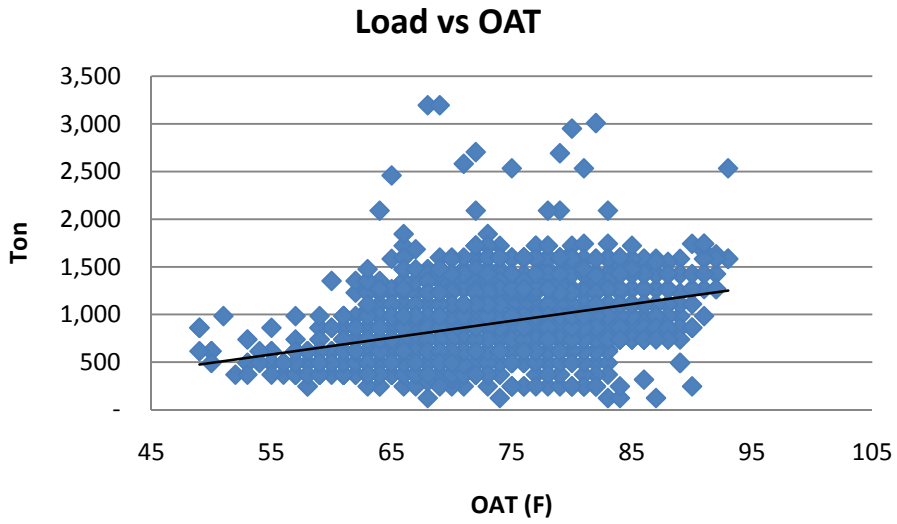
Not Applicable

3.1 Condenser Water Pumps

B & G Vertical Split Case Pumps Model

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Baseline energy consumption of the existing chiller plant was established by creating an hourly Excel spreadsheet. Cooling loads were calculated from handwritten hourly chiller logs for the 2008-2009 period. The relationship between load and outside air temperature is shown below.



In order to establish the baseline for the existing chillers, NORESCO obtained performance data under ARI and part-load conditions from the chiller manufacturer, as is shown in the Table below. The data included chiller efficiency for various entering condenser water and leaving chilled water temperatures. We used this data to create performance curves which were used as inputs for the spreadsheet model. The first curve is a bi-quadratic curve that adjusts the electric input ratio as a function of the leaving chilled water temperature and condenser water temperature. The curve normalizes to 1.0 at the rated chilled water and condenser water temperatures. The second curve that was created is a bi-quadratic curve that adjusts the electric input ratio as a function of the part load ratio and the differential between the condenser and leaving chilled water temperature.

Fixed speed compressor with **constant** flow - kW/ton									
TON	85/42	85/44	85/46	75/42	75/44	75/46	65/42	65/44	65/46
1,250	0.6550	0.6406	0.6284	0.5899	0.5829	0.5766	0.5519	0.5438	0.5422
1,125	0.6457	0.6337	0.6218	0.5796	0.5769	0.5743	0.5481	0.5488	0.5505
1,000	0.6420	0.6331	0.6273	0.5869	0.5842	0.5817	0.5575	0.5591	0.5602
875	0.6486	0.6423	0.6367	0.5957	0.5920	0.5925	0.5655	0.5662	0.5683
750	0.6618	0.6569	0.6542	0.6086	0.6107	0.6141	0.5829	0.5889	0.5954
625	0.6917	0.6850	0.6845	0.6402	0.6432	0.6458	0.6170	0.6226	0.6363
500	0.7340	0.7346	0.7396	0.6910	0.6991	0.7069	0.6685	0.6815	0.7043
375	0.8391	0.8438	0.8467	0.7912	0.7960	0.7971	0.7473	0.7839	0.8357
250	1.0251	1.0213	1.0175	0.9285	0.9296	0.9471	0.9300	1.0245	1.1424
125	1.4449	1.4289	1.4257	1.3343	1.3649	1.4630	1.6116	1.7478	1.9159

Post-installation energy consumption was calculated in the same manner as the baseline. We used hourly TMY weather data for Chicago. The chiller performance data was changed in the post-installation to reflect the chiller VFD retrofit. The table below shows the proposed performance data which was obtained from the chiller manufacturer. Savings were defined as the difference between the baseline and post-installation energy consumption.

Variable speed compressor with **constant** flow - kW/ton									
TON	85/42	85/44	85/46	75/42	75/44	75/46	65/42	65/44	65/46
1,250	0.6510	0.6139	0.5852	0.5356	0.5116	0.4866	0.4692	0.4442	0.4213
1,125	0.6243	0.5953	0.5675	0.4984	0.4740	0.4476	0.4188	0.3977	0.3771
1,000	0.6256	0.5929	0.5638	0.4760	0.4499	0.4257	0.3784	0.3569	0.3380
875	0.6308	0.5965	0.5673	0.4680	0.4411	0.4165	0.3496	0.3292	0.3092
750	0.6399	0.6092	0.5857	0.4812	0.4551	0.4292	0.3302	0.3128	0.2950
625	0.6650	0.6380	0.6180	0.5092	0.4822	0.4511	0.3368	0.3110	0.2867
500	0.7143	0.6935	0.6758	0.5607	0.5215	0.4832	0.3599	0.3354	0.3123
375	0.8212	0.7992	0.7770	0.6289	0.5930	0.5582	0.4225	0.3917	0.3576
250	1.0674	1.0297	1.0070	0.8160	0.7792	0.7415	0.5499	0.5040	0.4746
125	1.6583	1.9898	1.8438	1.6302	1.5825	1.4819	1.0444	0.9647	0.8368

ECM 4 LIGHTING EFFICIENCY UPGRADES

OVERVIEW

NORESCO has conducted an investigation of the lighting systems at the Northeastern Illinois University (NEIU) and found that, although energy efficient T8, T5 and T5HO lighting systems are already installed in most areas, there is still significant opportunity for further improvements. NORESCO proposes to retrofit and install new lighting systems and, where appropriate, control the luminaires with occupancy sensors, thereby minimizing unnecessary usage.

The scope of our proposed lighting improvement measures includes the buildings listed below.

Building A – no retrofit	Library
Building B	Science Building
Building C	Physical Education Complex
Building D	Child Care Building
Building E	Grounds & Maintenance
Building H	Building J
Fine Arts Building	Building I
Student Union	Center for Inner City Studies
Lech Walesa Hall	Main Campus Tunnel Lighting
Parking Facility	Main Campus Site Lighting – no retrofit

Manufacturers have introduced a succession of improved lighting technologies in the past few years that provide new opportunities for achieving greater energy efficiency. In order to optimize the overall electric savings and provide standardized lamps and ballasts, NORESCO proposes to retrofit or replace existing first generation 4-foot T8 lighting in high use areas, as well as any remaining T12 fluorescent luminaries, with new "super efficient" T8 lighting. The super efficient system features high lumen, high color rendering, low-mercury lamps, matched with high-efficiency new generation electronic ballasts. In addition to delivering improved visual quality, the super T8 lamp lasts approximately 50 percent longer than basic-grade T8 lamps (based on the industry standard three hour cycles with instant start ballasts), saving considerable maintenance costs. Additionally, super T8 lighting with optimal electronic ballasts can often cost effectively replace basic grade T8 lamps/ballast combinations, especially in common areas subject to high daily use. Other T12 lamp sizes not currently available in super efficiency will be replaced with the highest efficiency T8 combination available.

DETAILED DESCRIPTION

The existing lighting systems at NEIU primarily consist of fluorescent luminaires with T8 lamps and electronic ballasts, T5 lamps and electronic ballasts, T5HO lamps and electronic ballasts, or T12 lamps and magnetic ballast. Some of the buildings are controlled via lighting control systems. Several of the restrooms have occupancy sensor control. Many of the corridors, as well as the Parking Facility, have daylight controls installed to take advantage of the existing ambient light.

Below are brief descriptions of the existing lighting systems and proposed energy efficiency solutions at each building. A detailed building-by-building, room-by-room lighting survey is included at the end of this section.

Building A

Existing Systems

Building A recently underwent a major renovation and most of the lighting in classrooms and offices was upgraded to T5HO linear fluorescent luminaires. Energy efficient T8 lamps and ballasts are installed in rest rooms and storage areas. Compact fluorescent downlights with dimming ballasts provide supplemental lighting. In the basement level mechanical room, tunnel and crawl space we found a mixture of T8 and T12 linear fluorescent luminaires.

Proposed Solutions

The existing luminaires containing two, 4-foot T12 lamps and magnetic ballasts will be retrofitted new 28-watt, 4-foot T8 lamps and high efficiency low-power electronic ballasts.

ECMs considered but not proposed:

- Retrofitting any existing T8 or T5HO linear fluorescent luminaires except where noted.
- Retrofitting any existing compact fluorescent luminaires.
- Replacing any existing exit signs.

Building B

Existing Systems

The existing lighting systems in Building B predominantly consist of 2-lamp, 3-, 4- and 5-foot suspended, direct/indirect T8 linear fluorescent luminaires in classrooms, labs, offices and corridors. The ballasts in the classroom luminaires are dimmable. The corridor lighting is connected to a photocell for daylighting control. There are 2- and 4-lamp, 2-foot T8 linear fluorescent luminaires in private restrooms and storage rooms. The lighting system in the public restrooms primarily consists of 2-lamp 4-foot strip luminaires. The existing lighting in the lower

level largely consists of 1-, 2- and 4-lamp, 4-foot T12, with 2-lamp, 4-foot T8 linear fluorescent luminaires in the utility areas and corridors.

Proposed Solutions

- The existing luminaires containing two, 3-foot T8 lamps, and electronic ballasts will be retrofitted new 25-watt, 3-foot T8 lamps and high efficiency low-power electronic ballasts.
- The existing luminaires containing one, 4-foot T8 lamp, and electronic ballasts will be retrofitted with a new 28-watt, 4-foot T8 lamp and a high efficiency, low-power electronic ballast.
- The existing luminaires containing two, 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing 2x2-foot recessed luminaires containing two, T8 1-5/8-inch U-bent lamps and electronic ballasts will be retrofitted with two, 17-watt, 2-foot T8 lamps, and one, high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing 2x2-foot recessed luminaires containing two, T8 6-inch U-shaped lamps and electronic ballasts will be retrofitted with two, 17-watt, 2-foot-foot T8 lamps, and one, high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- Install occupancy sensors in classrooms, labs, conference rooms, and rest rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Retrofitting any existing 2-lamp, 5-foot T8 linear fluorescent luminaires.
- Replacing any existing exit signs.

Building C

Existing Systems

The existing lighting systems in Building C primarily consist of 3-lamp, 4-foot T8 linear fluorescent and 2-lamp, 2-foot recessed, direct/indirect biaxial fluorescent luminaires in offices and common areas. There are compact fluorescent downlights in office areas, conference rooms and lobbies. There are 2-lamp, 3- and 4-foot linear fluorescent luminaires in rest rooms and reception areas. The restrooms have occupancy sensors installed. The lighting in conference rooms also includes 2-lamp, 2-foot, T8 6-inch U-bent fluorescent luminaires. The lighting in file rooms and other common areas consists of 3-lamp, 4-foot T8 linear fluorescent luminaires. The existing lighting in the lower level primarily consists of 2-lamp, 4-foot T8 and 2-lamp, 4-foot T12 linear fluorescent luminaires in the utility areas and corridors.

Proposed Solutions

- The existing luminaires in containing two, 3-foot T8 lamps and electronic ballasts will be retrofitted with new 25-watt, 3-foot T8 lamps and high efficiency low-power electronic ballasts.
- The existing luminaires containing one, 4-foot T12 lamp, and electronic ballasts will be retrofitted with a new 28-watt, 4-foot T8 lamp and high efficiency, low-power electronic ballast.
- The existing luminaires containing two, 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing luminaires containing three, 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing luminaires containing four, 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing 2x4-foot recessed luminaires containing three, 4-foot T8 lamps with electronic ballasts will be retrofitted with two, 28-watt, 4-foot T8 lamps, and one, high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x2-foot recessed luminaires containing two, T8 6-inch U-shaped lamps and electronic ballasts will be retrofitted with three, 17-watt, 2-foot- T8 lamps, and one, high efficiency, normal-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- Install occupancy sensors in conference rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Retrofitting any existing compact fluorescent luminaires.
- Replacing any existing compact fluorescent lamps.
- Replacing any existing exit signs.

Building D

Existing System

The existing lighting systems in Building D primarily consists of 1-, 2-, and 3-lamp, 4-foot T8 linear fluorescent, 2- and 3-lamp, 2-foot T8, 1-5/8-inch U-bent fluorescent, and 2-lamp, 2-foot T8, 6-inch U-bent fluorescent luminaires in offices and common areas. The restroom lighting predominantly consists of 2-lamp, 4-foot T8 linear fluorescent luminaires. The lighting in the corridors largely consists of 1-, 2-, 3-, and 4-lamp, 4-foot T8 linear fluorescent luminaires with 3-lamp, 2-foot T8, 1-5/8-inch U-bent fluorescent luminaires. The existing lighting systems in the lower level primarily consist of 1-lamp and 2-lamp, 4-foot T8 and 1-lamp, and 2-lamp, 4-foot T12 linear fluorescent luminaires in the utility areas, corridors and tunnels.

Proposed Solutions

- The existing downlight luminaires containing one, 175w metal lamp and magnetic ballast will be replaced with a new luminaire containing two 32-watt, compact fluorescent lamps, and one electronic ballast.
- The existing luminaires containing one, 4-foot T12 lamp and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two, 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T12 lamps and magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T12 lamps and magnetic ballasts will be retrofitted with new 28-watt, 4-foot-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed luminaires containing three, 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x2-foot recessed lens luminaires containing two T8 1-5/8-inch U-bent lamps and electronic ballasts will be retrofitted with two 17-watt, 2-foot T8 lamps, and one, high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing 2x2-foot recessed lens luminaires containing two T8 6-inch U-bent lamps and electronic ballasts will be retrofitted with two 17-watt, 2-foot T8 lamps, and one high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing 2x2-foot recessed parabolic luminaires containing two T8 6-inch- U-shaped lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one high efficiency, normal-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- Install occupancy sensors in rest rooms and conference rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Retrofitting any existing compact fluorescent luminaire.
- Replacing any existing exit signs.

Building E

Existing Systems

The existing lighting systems in Building E primarily consists of 2-, 3-, and 4-lamp, 4-foot T8 linear fluorescent, 2- and 3-lamp, 2-foot T8, 1-5/8-inch U-bent fluorescent, and 2-lamp, 2-foot T8, 6-inch U-bent fluorescent luminaires in offices and common areas. The existing lighting in the bookstore primarily is 2- and 4-lamp, 4-foot T8 linear fluorescent or 2- and 4-lamp, 4-foot T12 linear fluorescent luminaires, as well as suspended 400-watt metal halide luminaires. The lighting in the radio studio mostly consists of 1- and 2-lamp, 4-foot T12 linear fluorescent and 1- and 2-lamp, 4-foot T8 linear fluorescent luminaires. The restroom lighting predominantly consists of 2-lamp, 3-foot T8 linear fluorescent, 2- or 3-lamp, 4-foot T8 linear fluorescent, and 2-lamp, 2-foot T8, 1-5/8-inch U-bent fluorescent luminaires. The restrooms have occupancy sensors installed. The student lounge lighting consists of 2-lamp, 2-foot T8, 6-inch U-bent fluorescent luminaires. The auditorium lighting primarily consists of quartz halogen downlights. The corridor lighting primarily consists of 2-, 3-, and 6-lamp, 4-foot T8 linear fluorescent luminaires.

Proposed Solutions

- The existing luminaires containing one, 4-foot T12 lamp and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one, high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T12 lamps and magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one, high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed luminaires containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two, 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x4-foot recessed luminaires containing four 4-foot T12 lamps and magnetic ballasts will be retrofitted with two, 28-watt, 4-foot T8 lamps, one, high efficiency, normal-power, electronic ballast and white reflector.
- The existing 4x4-foot recessed luminaires containing six 4-foot T8 lamps and electronic ballasts will be retrofitted with four 28-watt, 4-foot T8 lamps, one, high efficiency, normal-power, electronic ballast and white reflectors.
- The existing 2x2-foot recessed parabolic luminaires containing three T8 1-5/8-inch U-bent lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one, high efficiency, high-power, electronic ballast and white reflector. Replacing

the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.

- The existing 2x2-foot recessed luminaires containing two T8 1-5/8-inch U-bent lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one, high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing 2x2-foot recessed luminaires containing two T8 6-inch- U shaped lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one, high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing metal halide pendant luminaires installed in the book store will be replaced with a new pendant mounted luminaire having four 28-watt, 4-foot T8 lamps and one high efficiency, normal-power, electronic ballast.
- The existing downlight luminaires containing one, 100-watt metal lamp and magnetic ballast will be replaced with a new luminaire containing two 26-watt, compact fluorescent lamps, and one electronic ballast.
- The existing incandescent lamps will be replaced with compact fluorescent lamps of appropriate wattage.
- Install occupancy sensors in album storage to minimize unnecessary usage.

ECMs considered but not proposed:

- Retrofitting any compact fluorescent luminaires.
- Any existing auditorium lighting.
- Replacing any existing exit signs.

Building H

Existing Systems

The existing lighting systems in Building H primarily consist of 2-lamp, 2-foot T12 U-bent fluorescent luminaires and 2-, 3-, and 4-lamp, 4-foot T8 linear fluorescent in offices and common areas. The boiler room lighting consists of 2- and 4-lamp, 4-foot T12 linear fluorescent, 2- and 4-lamp, 4-foot T8 linear fluorescent, and metal halide luminaires. The receiving area primarily consists of 1- and 2-lamp, 4-foot T8 linear fluorescent and 1- and 2-, 4-foot T12 linear fluorescent luminaires. The locker room and the boiler room consist of 2-lamp, 4-foot T8 and 2-lamp, 4-foot T12 linear fluorescent luminaires. The first floor restrooms consist of 2-lamp, 3- and 4-foot T8 linear fluorescent, 2-lamp, 2-foot, and 2-lamp, 4-foot T12 linear fluorescent luminaires.

Proposed Solution

- The existing luminaires containing two 2-foot T12 lamp and magnetic ballast will be retrofitted with new 17-watt, 2-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 3-foot T12 lamp and magnetic ballast will be

retrofitted with new 25-watt, 3-foot T8 lamps, and one, high efficiency, low-power, electronic ballast.

- The existing luminaires containing one 4-foot T12 lamp and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one, high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one, high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T12 lamps and magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one, high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed luminaires containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one, high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x4-foot recessed luminaires containing four 4-foot T12 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one, high efficiency, normal-power, electronic ballast and white reflector.
- The existing 2x2-foot recessed luminaires containing two T8 6-inch- U shaped lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one, high efficiency high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing metal halide high bay luminaires will be replaced with a new luminaire having six 54-watt, T5HO lamps and electronic ballast.
- Install occupancy sensors in rest rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Replacing any existing metal halide wall packs.
- Replacing any existing exit signs.

Fine Arts Center

Existing Systems

The existing lighting systems in the Fine Arts Center predominantly consist of 3-lamp, 3-foot and 2-, 3-, and 4-lamp, 4-foot suspended, direct/indirect T8 linear fluorescent luminaires in most classrooms and labs. Some of these luminaires also have track lighting attached, which has been retrofitted with compact fluorescent lamps. There are also 2-, 3- and 4-lamp, 4-foot T8 linear fluorescent luminaires in other classrooms, offices, practice rooms and other common areas. The restroom lighting consists of 2-lamp, 3- and 4-foot, T8 linear fluorescent luminaires. The corridor lighting primarily consists of 2- and 3-lamp, 4-foot T8 linear fluorescent luminaires as well as compact fluorescent downlights. In addition, there is a metal halide truss system to

provide indirect lighting in corridors. The recital hall lighting is a combination of incandescent and metal halide luminaires. The existing lighting in the lower level primarily consists of 2-lamp, 4-foot T8 linear fluorescent luminaires in the utility areas and corridors.

Proposed Solutions

- The existing downlight luminaires containing one 100-watt metal lamp and magnetic ballast will be replaced with a new luminaire containing two 26-watt, compact fluorescent lamps, and one electronic ballast.
- The existing luminaires containing two 3-foot T8 lamps and electronic ballast will be retrofitted with new 25-watt, 3-foot T8 lamps, and one, high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 3-foot T8 lamps and electronic ballast will be retrofitted with new 25-watt, 3-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T8 lamp and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and two electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps, and two high efficiency, low-power, electronic ballasts.
- The existing luminaires containing three 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing three 4-foot T8 lamps and two electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps, and two high efficiency, low-power, electronic ballasts.
- The existing luminaires containing four 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T8 lamps and two electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps, and two high efficiency, low-power, electronic ballasts.
- The existing 2x4-foot recessed luminaires containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast and white reflector.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast and white reflector.
- The existing 2x2-foot recessed luminaires containing two T8 6-inch U-shaped lamps and electronic ballasts will be retrofitted with two 17-watt, 2-foot T8 lamps, and one high

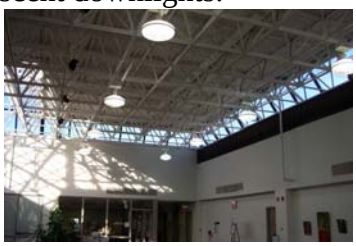
efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.
- Install occupancy sensors in classrooms, studios, practice rooms, and dressing rooms to minimize unnecessary usage.

ECMs considered but not proposed:
- Retrofitting any existing compact fluorescent luminaires.
- Retrofitting any existing metal halide luminaires.
- Retrofitting any luminaires in the recital hall.
- Replacing any existing exit signs.

Student Union

Existing Systems

The existing lighting systems in the Student Union primarily consist of 3-lamp, 2-foot U-bent fluorescent luminaires in offices and meeting rooms. The lighting in the kitchen, serving areas, utility and common areas largely consists of 1-, 2-, and 4-lamp, 4-foot T8 linear fluorescent luminaires. The lighting in Alumni Hall primarily consists of incandescent downlights which are dimmed. The lighting in the Golden Eagles room mainly consists of 1-lamp, 4-foot T8 linear fluorescent luminaires and compact fluorescent downlights. The second floor lounge has pendant–mounted metal halide luminaires. The cafeteria has compact fluorescent pendants in addition to compact fluorescent and metal halide downlights. The restroom lighting consists of 2-lamp, 3- and 4-foot T8 linear fluorescent luminaires. The corridor lighting consists of 3-lamp, 4-foot suspended T8 linear fluorescent luminaires and compact fluorescent downlights.



Proposed Solutions

- The existing luminaires containing two 2-foot T12 lamp and magnetic ballast will be retrofitted with new 17-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T12 lamp and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T12 lamps and magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing three 4-foot T8 lamps and electronic ballast will be

retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.

- The existing luminaires containing four 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T12 lamps and magnetic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed luminaires containing four 4-foot T12 lamps and magnetic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast and white reflector.
- The existing 2x4-foot recessed luminaires containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast and white reflector.
- The existing 2x2-foot recessed parabolic luminaires containing three T8 1-5/8-inch U-bent lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one high efficiency, normal-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.
- Install occupancy sensors in meeting rooms and restrooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Replacing any existing metal halide luminaires in the second floor lounge.
- Replacing the existing lighting in Alumni Hall.
- Retrofitting any compact fluorescent pendant luminaires.
- Replacing any existing metal halide downlights.
- Replacing any existing exit signs.

Lech Walesa Hall

Existing Systems

The lighting systems in Lech Walesa Hall primarily consist of 2- and 4-lamp, 4-foot T8 linear fluorescent luminaires in offices and common areas. The lighting systems in classrooms largely consist of 4- and 6-lamp, 4-foot T8 linear fluorescent luminaires. The lecture halls primarily are lit with halogen downlight luminaires. The computer lab lighting consists of 2-lamp, 4-foot direct/indirect, suspended T8 linear fluorescent luminaires and 2-lamp, 2-foot T8, U-bent fluorescent luminaires. The restroom lighting primarily consists of 2-lamp, 4-foot T8 linear fluorescent luminaires. The corridor lighting predominantly consists of 2-lamp, 3-foot and 2-lamp, 4-foot T8 linear fluorescent luminaires and incandescent fixtures retrofitted with compact fluorescent lamps. The ballasts in the T8 luminaires were identified to be low power factor.

Proposed Solution

- The existing luminaires containing one 2-foot T8 lamp and electronic ballast will be retrofitted with a new 17-watt, 2-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 2-foot T12 lamp and magnetic ballast will be retrofitted with a new 17-watt, 2-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 2-foot T8 lamp and electronic ballast will be retrofitted with new 17-watt, 2-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 3-foot T8 lamp and electronic ballast will be retrofitted with new 25-watt, 3-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T8 lamps and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28 -watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 4x4-foot recessed luminaires containing six 4-foot T8 lamps and electronic ballasts will be retrofitted with four 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflectors.
- The existing 2x2-foot recessed luminaires containing two T8 6-inch- U-shaped lamps and electronic ballasts will be retrofitted with two 17-watt, 2-foot T8 lamps, and one high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.
- Install occupancy sensors in classrooms and rest rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Replacing any existing halogen lamps in lecture rooms.
- Replacing any existing compact fluorescent lamps.
- Replacing any existing exit signs.

Parking Facility

Existing Systems

The lighting systems in the Parking Facility primarily consist of 2-lamp, 4-foot T8 linear fluorescent luminaires with 175- and 100-watt metal halide luminaires in the parking decks. The luminaires on the outer edges of the parking decks are connected to a series of photocells to take advantage of natural daylight during high ambient light levels. The fluorescent luminaires are for emergency lighting. The upper level parking deck is lit with 400-watt metal halide luminaires. The stairwells are lit by LED luminaires. The elevator lobby luminaires are compact fluorescent.The lighting systems in the Parking Office and Public Safety Office are predominantly 2-lamp, 4-foot T5 linear fluorescent luminaires. Both recessed and suspended direct/indirect . The restroom lighting is compact fluorescent. The lighting in utility and common areas is 4-lamp, 4-foot T8 linear fluorescent luminaires. The corridor lighting is compact fluorescent.

Proposed Solutions

- The existing luminaires containing one 4-foot T8 lamp and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing office spaces lit with 2x4-foot recessed luminaires containing four T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 175-watt metal halide garage luminaires will be replaced with a new vapor tight fixture having three 32-watt, 4-foot T8 lamps, and one high efficiency, high-power, electronic ballast. Replacing the metal halide luminaires will have the added benefit of reducing maintenance costs, as well as providing a luminaire which starts instantly without the warm up period characteristic of a high intensity discharge lamp.
- The existing 100-watt metal halide garage luminaires will be replaced with a new vapor tight fixture having three 32-watt, 4-foot T8 lamps, and one high efficiency, high-power, electronic ballast. Replacing the metal halide luminaires will have the added benefit of reducing maintenance costs, as well as providing a luminaire which starts instantly without the warm up period characteristic of a high intensity discharge lamp.

ECMs considered but not proposed:

- Retrofitting any existing 400-watt metal halide luminaires on the upper parking deck.
- Retrofitting any existing T5 linear fluorescent luminaires.
- Retrofitting any existing compact fluorescent luminaires except where noted.
- Replacing any existing exit signs.

Library

Existing Systems

The lighting systems in the Library primarily consists of 2-lamp, 4-foot T8 linear fluorescent luminaires in the general stack areas. The lighting system in offices, labs, and common areas predominantly consists of 2-lamp, 2-foot, T8 6-inch U-bent fluorescent luminaires and 2-, 3- and 4-lamp, 4-foot T8 linear fluorescent luminaires. The restroom lighting primarily consists of 2- and 4-lamp, 4-foot T8 linear fluorescent luminaires. The stairwell lighting primarily consists of 2-lamp, 4-foot T8 linear fluorescent and 2-lamp, 4-foot T12 linear fluorescent luminaires. The luminous ceilings consist of 1-lamp, 4-foot T12 and 1-lamp, 4-foot T8 linear fluorescent luminaires.

Proposed Solutions

- The existing luminaires containing one 4-foot T8 lamp and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T12 lamp and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T12 lamps and magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast and white reflector.
- The existing 2x2-foot recessed luminaires containing two T8 6-inch- U-shaped lamps and electronic ballasts will be retrofitted with three 17-watt, 2-foot T8 lamps, and one high efficiency, high-power, electronic ballast and white reflector. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.
- Install occupancy sensors in rest rooms, study rooms and offices to minimize unnecessary usage.

ECM considered but not proposed:

- Replacing any existing exit signs.

Science Building

Existing Systems

The lighting systems in the Science Building primarily consist of 3- or 4-lamp, 4-foot T8 linear fluorescent luminaires in offices and classrooms. Most of these luminaires have an opal drop-dish lens installed, which lowers the efficiency of the luminaire as much as 40 percent. The lecture hall lighting is largely 1-lamp, 3-foot T8 linear fluorescent luminaires and incandescent fixtures that have been retrofitted with compact fluorescent lamps. The lighting in utility and common areas primarily consists of 2- and 4-lamp, 4-foot T8 linear fluorescent luminaires. The rest room lighting primarily consists of 2-lamp, 3-foot T8 and 2-lamp, 4-foot T8 linear fluorescent luminaires. The corridor lighting predominantly consists of 1-lamp, 3- and 4-foot T8 linear fluorescent luminaires, 2-lamp, 2-foot U-bent fluorescent luminaires, and incandescent fixtures thath have been retrofitted with compact fluorescent lamps. Some of the corridor luminaires also have the opal drop dish lens installed. The ballasts in the existing T8 luminaires were identified to be low power factor.

Proposed Solutions

- The existing downlight luminaires containing one, 100-watt metal lamp and magnetic ballast will be replaced with a new luminaire containing two 26-watt, compact fluorescent lamps, and one electronic ballast.
- The existing luminaires containing one 2-foot T8 lamp and electronic ballast will be retrofitted with a new 17-watt, 2-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 3-foot T8 lamp and electronic ballast will be retrofitted with a new 25-watt, 3-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 3-foot T8 lamps and electronic ballast will be retrofitted with new 25-watt, 3-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T8 lamps and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing vaportight luminaires containing four 4-foot T8 lamps and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing 2x4-foot recessed opal, drop dish lens, luminaires in storage rooms, containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast, and white reflector
- The existing 2x4-foot recessed, opal, drop dish lens, luminaires containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps,

one high efficiency, low-power, electronic ballast and white reflector.

- The existing 2x4-foot recessed, opal, drop dish lens, luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, low-power, electronic ballast, and white reflector.
- The existing 2x2-foot recessed, opal, drop dish lens, luminaires containing two T8 6-inch- U-shaped lamps and electronic ballasts will be retrofitted with two 17-watt, 2-foot T8 lamps, and one high efficiency, high-power, electronic ballast, white reflector and new .125 prismatic lens. Replacing the expensive U-shaped lamps will have the added benefit of reducing maintenance costs.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.
- Install occupancy sensors in classrooms, labs, prep rooms, and rest rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Replacing any existing compact fluorescent lamps.
- Replacing any existing exit signs.

Physical Education Complex

Existing Systems

The lighting systems in the Physical Education Complex underwent an energy efficiency project a few years ago. The facility had the gymnasium lighting changed to T5HO linear fluorescent luminaires in addition to having the existing 3- and 4-lamp, 4-foot T8 linear fluorescent luminaires retrofitted with reflectors, two T8 lamps and electronic ballasts. It now predominantly consists of 1- and 2-lamp, 4-foot T8 linear fluorescent luminaires in offices, classrooms and common areas. There are also compact fluorescent and mercury vapor downlights in office areas. The locker rooms consist of 1- and 2-lamp, 4-foot T8 linear fluorescent luminaires. The racquetball courts are lit with metal halide luminaires. The swimming pool is lit with indirect 1,000-watt metal halide luminaires. The restroom lighting consists of primarily 2-lamp, 3-foot T8 and 1- and 2-lamp, 4-foot T8 linear fluorescent luminaires. The corridor lighting system primarily consists of 1-lamp, 4-foot T8 linear fluorescent luminaires and mercury vapor downlights.

Proposed Solutions

- The existing downlight luminaires containing one, 100-watt metal halide lamp and magnetic ballast will be replaced with a new luminaire containing two 26-watt, compact fluorescent lamps, and one electronic ballast.
- The existing luminaires containing one 3-foot T8 lamp and electronic ballast will be retrofitted with a new 25-watt, 3-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 3-foot T8 lamp and electronic ballast will be

retrofitted with new 25-watt, 3-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T8 lamp and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing two 4-foot T8 lamp and electronic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- Install occupancy sensors in classrooms and rest rooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Replacing the existing 400-watt metal halide luminaires in the racquetball courts.
- Replacing the existing 1000-watt metal halide luminaires in swimming pool. The lack of adequate maneuverability in and around the pool deck makes accessing the existing luminaires, with a motorized lift, precarious.
- Retrofitting any existing compact fluorescent luminaires.
- Replacing any existing exit signs.

Child Care Center

Existing Systems

The lighting systems in the Child Care Center, mainly consists of 2- and 4-lamp, 4-foot T8 linear fluorescent luminaires in offices, classrooms, corridors and common areas. There are also a very limited number of 2-lamp, 4-foot T12 linear fluorescent luminaires in mechanical rooms. The majority of the existing incandescent fixtures have been retrofitted with compact fluorescent lamps, although a very small amount of incandescent lamps still remain.

Proposed Solutions

- The existing luminaires containing two 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power, electronic ballasts.
- The existing luminaires containing two lamp, 4-foot T12 and energy efficiency magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and high efficiency, low-power, electronic ballasts.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.
- Install occupancy sensors in the kitchen to minimize unnecessary usage.

ECMs considered but not proposed:

- Replacing any existing compact fluorescent lamps.
- Replacing any existing exit signs.

Grounds & Maintenance Building

Existing Systems

The lighting systems in the Grounds & Maintenance Building, primarily consists of 250-watt metal halide low-bay luminaires in the garage, repair, and storage areas. The lighting in the office and locker room areas consists of 3-lamp, 4-foot T8 linear fluorescent and 2-lamp, 2-foot T8 linear fluorescent luminaires. The restroom lighting consists of 3-lamp, 4-foot T8 linear fluorescent, 2-lamp, 2-foot T8 linear fluorescent, and 2-lamp, 2-foot T12 linear fluorescent luminaires. In mechanical areas, 1-lamp, 4-foot T8 linear fluorescent luminaires have been installed.

Proposed Solutions

- The existing luminaires containing two lamp, 2-foot T12 and magnetic ballast will be retrofitted with new 17-watt, 2-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing one 4-foot T8 lamp and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp and high efficiency electronic ballast.
- The existing 2x4-foot recessed luminaires containing three 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing 250-watt metal halide luminaires will be replaced with new luminaires containing four 28-watt, 4-foot T8 lamps, and one high efficiency, normal-power, electronic ballast.
- Install occupancy sensors in restrooms to minimize unnecessary usage.

ECMs considered but not proposed:

- Retrofitting any existing 2-lamp, 2-foot T8, linear fluorescent luminaires except where noted.
- Replacing any existing exit signs.

Building J

Existing Systems

The lighting systems in Building J predominantly consists of 2- and 4-lamp, 4-foot T8 linear

fluorescent luminaires in offices, studios, shops, corridors, and common areas. Our audit indentified a very small number of luminaires which still contain T12, linear fluorescent lamps and magnetic ballasts. There are also incandescent vanity luminaires in restrooms.

Proposed Solutions

- The existing luminaires containing two 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing luminaires containing four 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing 2x4-foot recessed luminaires containing four 4-foot T8 lamps and electronic ballasts will be retrofitted with two 28-watt, 4-foot T8 lamps, one high efficiency, normal-power, electronic ballast and white reflector.
- The existing incandescent lamps will be replaced with new compact fluorescent lamps of the appropriate wattage.

ECM considered but not proposed:

- Replacing any existing exit signs.

Building I

Existing Systems

The lighting systems in Building I primarily consists of 2- and 4-lamp, T12 linear fluorescent lamp and magnetic ballast luminaires. There are also a limited number of 4-lamp luminaires whose ballasts have failed and have been replaced with electronic ballasts and T8 linear fluorescent lamp combinations.

Proposed Solutions

- The existing luminaires containing two 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and one high efficiency low-power electronic ballasts.
- The existing luminaires containing two 4-foot T12 lamps, and energy efficient magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high efficiency, low-power, electronic ballast.
- The existing luminaires containing four 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing luminaires containing four lamp, 4-foot T12 and energy efficient magnetic ballast will be retrofitted with new 28-watt, 4-foot T8 lamps, and one high

efficiency, low-power, electronic ballast.
- Install occupancy sensors in rest rooms to minimize unnecessary usage.

ECM considered but not proposed:
- Replacing any existing exit signs.

Main Campus Tunnel Lighting

Existing Systems

The lighting systems in the Main Campus tunnels is composed of 1- and 2-lamp, 4-foot T8 linear fluorescent as well as 1-, 2- and 4-lamp, 4-foot T12 linear fluorescent luminaires. Some of the tunnel sections are controlled by occupancy sensors.

Proposed Soltutions

- The existing luminaires containing one 4-foot T8 lamp, and electronic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp and high efficiency, low-power electronic ballast.
- The existing luminaires containing one 4-foot T12 lamp, and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballast.
- The existing luminaires containing two 4-foot T8 lamps, and electronic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing luminaires containing two 4-foot T12 lamps, and magnetic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- The existing luminaires containing four 4-foot T12 lamps, and magnetic ballasts will be retrofitted with new 28-watt, 4-foot T8 lamps and high efficiency, low-power electronic ballasts.
- Install occupancy sensors in the tunnels to minimize unnecessary usage.

ECM considered but not proposed:
- Replacing any existing exit signs.

Main Campus Site Lighting

Existing Systems

The outdoor lighting systems on the Main Campus, primarily consists of 400- and 175-watt metal halide luminaires in the parking lots. The roadway lighting is composed of 400-watt cobra head high pressure sodium luminaires. The pedestrian scale, walkway lighting includes 150-watt

high pressure sodium and metal halide luminaires.

Proposed Solutions

No proposed solutions for site lighting

ECMs considered but not proposed:

- Retrofitting any metal halide luminaires.
- Retrofitting any high pressure sodium luminaires

Center for Inner City Studies

Existing Systems

The lighting systems in the Center for Inner City Studies recently underwent an energy efficient retrofit project a few years ago. The facility was retrofitted with linear fluorescent T8 and U-bent T8 lamps in combination with high efficiency, low ballast factor, electronic ballasts. During our audit we did locate some T12 linear fluorescent lighting in storage areas, as well as the classroom chalkboard lighting. Although most of the incandescent lamps have been replaced with energy efficient compact fluorescent retrofits, our audit did locate a number of incandescent lamps that have not been retrofitted.

Proposed Solutions

- The existing luminaires containing one 2-foot T12 lamp, and magnetic ballast will be retrofitted with a new 17-watt, 2-foot T8 lamp and high efficiency, low-power electronic ballast.
- The existing luminaires containing one 3-foot T12 lamp, and magnetic ballast will be retrofitted with a new 25-watt, 3-foot T8 lamp and high efficiency, low-power electronic ballast.
- The existing luminaires containing one 4-foot T12 lamp, and magnetic ballast will be retrofitted with a new 28-watt, 4-foot T8 lamp and high efficiency, low-power electronic ballast.
- Replace any existing incandescent lamps with screw in compact fluorescent retrofit lamps of the appropriate wattage.

ECMs considered but not proposed:

- Retrofitting any existing T8, linear fluorescent luminaires except where noted.
- Retrofitting any existing compact fluorescent luminaires.
- Replacing any existing compact fluorescent lamps.
- Replacing any existing exit signs.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

No special field conditions or operating requirements are associated with this measure.

ENVIRONMENTAL ISSUES

Some fluorescent ballasts contain polychlorinated biphenyls or PCBs, a potential carcinogen that poses health risks. Production of PCBs was banned by the U.S. Environmental Protection Agency in 1976. Subsequently, all ballasts manufactured without PCBs after 1979 were required to carry a "No PCB" label. For optimal safety, any ballast that does not have a "No PCB" label will be treated by NORESCO as hazardous waste and will be placed in EPA approved containers and stored in compliance with EPA regulations. These containers will be transported by a Department of Transportation certified and registered hazardous waste handler to an EPA recycling and disposal center. Material manifest will be kept and provided to the State to document proper material disposal.

Any mercury containing bulbs will likewise be packaged and handled in accordance with EPA or State standards, whichever is more stringent. Any lighting materials that do not contain EPA covered hazardous or recyclable material will be discarded as general waste.

Once reaching the recycling and disposal center, recyclers will remove various components such as the chamber that contains the capacitor to reduce the volume and weight of materials sent to landfill or incineration. Ballasts can also yield copper, steel, and other valuable materials.

EQUIPMENT INFORMATION

Manufacturer and Type

The proposed lighting equipment will be manufactured by one of the following corporations listed below. Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

Lamps:

- Phillips Lighting Co., 200 Franklin Square Dr., Somerset, NJ, 08875, (908) 563-3000
- Osram-Sylvania Inc., 100 Endicott St., Danvers, MA, 01923, (800) 544-4828
- TCP, Inc., 325 Campus Drive, Aurora, OH 44202, (800) 324-1496

Ballasts:

- Universal Lighting Prod. Gr., 26 Century Blvd., Nashville, TN, 1 (800) BALLAST
- Osram-Sylvania Inc., 100 Endicott St., Danvers, MA, 01923, (800) 544-4828
- Advance Transformer Co., 10275 West Higgins, Rosemont, IL, 60018, (708) 390-5109

Luminaires:

- LSI Industries Inc., 10000 Alliance Road, Cincinnati, OH 45242, (513) 793-3200
- Delray Lighting Inc, 7545 N. Lockheed Drive, Burbank, CA 91505, (818) 767-3793
- H.E. Williams Inc., 831 West Fairview, Carthage, MO 64836, (417) 358-4065

Reflectors:
- A.L.P. Lighting Components, Inc., 6333 Gross Point Rd, Niles, IL 60714, (773) 774-9550
- Metal Optics, 2011 W. Rundberg Lane, Austin, TX, (512) 832-0025
- Reflect-A-Light, U.S. 17 North, Route 6, Box 800, Palatka, FL, 32177, (904)-328-1580

Occupancy Sensors and Daylight Controls:
- Sensor Switch Inc, 900 Northrop Rd., Wallingford, CT 06492 (800) 727-7483
- Watt Stopper, 2800 De La Cruz Blvd., Santa Clara, CA 95050 (408) 988-5331
- Leviton Mfg. Co., Inc. 59-25 Little Neck Pkwy, Little Neck, NY 11362, (800) 824-3005

Material Specification

Low Mercury T8 Lamps: The new medium bi-pin T8 lamps will be 3500° Kelvin with 20,000 hours of average rated life and a Color Rendering Index (CRI) of 85.

T8 Ballasts: The UL, CBM and CSA certified lighting ballasts will be of instant start type electronic ballast with a total harmonic distortion rating of less than 20 percent.

Compact Fluorescent Lamps: These UL and CSA certified lamps utilize high quality phosphors for an outstanding CRI from 80 to 85. The lamp temperature ranges from 2,700° to 4,100° Kelvin. Average rated life of the lamps is 10,000 hours.

Compact Fluorescent Luminaires: The new UL and CSA certified luminaires utilize heavy gauge post painted steel pans, durable two-pin thermoplastic sockets and socket clips for excellent lamp alignment and photometrics. Luminaires are either surface mount or designed for suspended ceiling or air handling plenums. All ballasts are factory tested.

Fluorescent Luminaires: The new luminaires will consist of heavy die-formed steel to insure uniformity and dimensional stability with a quality, rust-resistant high-gloss white enamel paint. The paint is baked on at high temperatures to ensure durability. The new parking facility luminaires will consist of a polyester reinforced fiberglass body with a high impact, DR acrylic lens. A seamless, thermo-set, polyurethane gasket ensures a vapor tight seal. Luminaires are all approved by UL. Luminaires are constructed with convenient knock-outs for ease of installation in a wide variety of applications that can be mounted using many usual methods. Lenses are constructed of high quality extruded virgin acrylic with excellent UV resistance.

Reflectors: Reflectors used in new luminaires are designed to enhance the output of the luminaires by utilizing highly polished, high purity anodized aluminum. Material form, fit and thickness requirements meet UL Standard 1570 requirements. The reflectors are designed to maximize light output, and provide even light distribution, ease of installation, and ballast access without tools.

Occupancy Sensors: Occupancy sensors will be ceiling- or wall-mounted and may use ultrasonic, passive infrared or dual technology. Turning lights off in unoccupied spaces provides savings by reducing electricity consumption, extending lamp life and reducing maintenance costs. All sensors and related components specified meet UL requirements.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

ID	Bldg Name	Area Description	Fixture	Pre Code	Existing Description	t Fixture	Post Code	Proposed Description
14	2 - Building B	164 VESTIBULE	1	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
15	2 - Building B	164 VESTIBULE	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
16	2 - Building B	145 CORRIDOR	3	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
21	2 - Building B	145 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
23	2 - Building B	158 CLASS	7	UD844DIM/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
24	2 - Building B	158 CLASS	8	UD42DIM/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	8	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
25	2 - Building B	158 CLASS	7	CF32SI	Incandescent Fixture w/ 32w Screw-In Compact Fluorescent Lamp	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
26	2 - Building B	158 CLASS	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
28	2 - Building B	152 CLASS	7	UD844DIM/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
29	2 - Building B	152 CLASS	8	UD42DIM/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	8	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
30	2 - Building B	152 CLASS	7	CF32SI	Incandescent Fixture w/ 32w Screw-In Compact Fluorescent Lamp	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
31	2 - Building B	152 CLASS	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
33	2 - Building B	146 CLASS	3	UD844DIM/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	3	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
34	2 - Building B	146 CLASS	4	UD42DIM/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
35	2 - Building B	146 CLASS	7	CF32SI	Incandescent Fixture w/ 32w Screw-In Compact Fluorescent Lamp	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
36	2 - Building B	146 CLASS	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
38	2 - Building B	159 OPEN OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
39	2 - Building B	159 OPEN OFFICE	1	UD32/T8L	3' Uplight/Downlight Fluorescentw/ (2) F25T8 Lamp & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
40	2 - Building B	159 OPEN OFFICE	3	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	3	N/R	No Retrofit Proposed
41	2 - Building B	159 OPEN OFFICE	6	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	6	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
42	2 - Building B	159 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
43	2 - Building B	160 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
44	2 - Building B	161 RESTROOM	1	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	1	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
45	2 - Building B	163 OFFICE	4	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
46	2 - Building B	163B RESTROOM	1	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	1	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
47	2 - Building B	166 CONFERENCE RM.	3	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
48	2 - Building B	167 OFFICE	2	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
49	2 - Building B	168 OFFICE	2	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
50	2 - Building B	162 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
51	2 - Building B	155 STORAGE	4	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
53	2 - Building B	153 OPEN OFFICE	6	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	6	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
54	2 - Building B	153 OPEN OFFICE	6	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
55	2 - Building B	153 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
56	2 - Building B	157 OFFICE	3	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	3	N/R	No Retrofit Proposed
57	2 - Building B	156 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
58	2 - Building B	154 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
59	2 - Building B	147 OPEN OFFICE	3	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
61	2 - Building B	147 OPEN OFFICE	7	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
62	2 - Building B	147 OPEN OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
63	2 - Building B	147 OPEN OFFICE	2	UD32/T8L	3' Uplight/Downlight Fluorescentw/ (2) F25T8 Lamp & (1) Electronic Ballast	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
64	2 - Building B	147 OPEN OFFICE	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
65	2 - Building B	147 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
66	2 - Building B	148 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
67	2 - Building B	150 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
68	2 - Building B	151 OFFICE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
69	2 - Building B	151 OFFICE	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
70	2 - Building B	149 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
71	2 - Building B	141 OPEN OFFICE	2	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
72	2 - Building B	141 OPEN OFFICE	5	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
73	2 - Building B	141 OPEN OFFICE	1	UD32/T8L	3' Uplight/Downlight Fluorescentw/ (2) F25T8 Lamp & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
74	2 - Building B	141 OPEN OFFICE	3	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
76	2 - Building B	141 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
77	2 - Building B	142 STORAGE	4	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
78	2 - Building B	143 OFFICE	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
79	2 - Building B	144 OFFICE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
80	2 - Building B	132 OFFICE	5	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
81	2 - Building B	119 OPEN OFFICE	7	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
82	2 - Building B	119 OPEN OFFICE	10	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	10	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
83	2 - Building B	119 OPEN OFFICE	3	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	3	N/R	No Retrofit Proposed
84	2 - Building B	119 OPEN OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
86	2 - Building B	119 OPEN OFFICE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
87	2 - Building B	119 OPEN OFFICE	2	UD32/T8L	3' Uplight/Downlight Fluorescentw/ (2) F25T8 Lamp & (1) Electronic Ballast	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
88	2 - Building B	119 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
89	2 - Building B	120 CONFERENCE RM.	5	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
90	2 - Building B	120 CONFERENCE RM.	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
91	2 - Building B	121 OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
92	2 - Building B	121 OFFICE	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast

93	2 - Building B	122 OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
94	2 - Building B	123 OFFICE	1	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
95	2 - Building B	124 OFFICE	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
96	2 - Building B	124 OFFICE	2	UD41/T8L	4' Uplight/Downlight Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
97	2 - Building B	125 OFFICE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
98	2 - Building B	125 OFFICE	1	UD41/T8L	4' Uplight/Downlight Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
99	2 - Building B	126 OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
100	2 - Building B	126 OFFICE	1	UD32/T8L	3' Uplight/Downlight Fluorescentw/ (2) F25T8 Lamp & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
101	2 - Building B	140 CONFERENCE ROOM	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
102	2 - Building B	140 CONFERENCE ROOM	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
103	2 - Building B	140 CONFERENCE ROOM	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
104	2 - Building B	140 CONFERENCE ROOM	2	CF32SI	Incandescent Fixture w/ 32w Screw-In Compact Fluorescent Lamp	2	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
105	2 - Building B	127 OFFICE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
106	2 - Building B	128 OFFICE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
107	2 - Building B	129 OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
108	2 - Building B	129 OFFICE	1	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	1	N/R	No Retrofit Proposed
109	2 - Building B	129 OFFICE	1	UD41/T8L	4' Uplight/Downlight Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
110	2 - Building B	130 OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
111	2 - Building B	130 OFFICE	1	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	1	N/R	No Retrofit Proposed
112	2 - Building B	130 OFFICE	1	UD41/T8L	4' Uplight/Downlight Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
114	2 - Building B	117 LOUNGE - CORRIDOR	14	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	14	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
116	2 - Building B	117 LOUNGE - CORRIDOR	6	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	6	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
117	2 - Building B	117 LOUNGE - CORRIDOR	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
118	2 - Building B	117 LOUNGE - CORRIDOR	19	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	19	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
119	2 - Building B	117 LOUNGE - CORRIDOR	3	UD32/T8L	3' Uplight/Downlight Fluorescentw/ (2) F25T8 Lamp & (1) Electronic Ballast	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
120	2 - Building B	117 LOUNGE - CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
121	2 - Building B	100 CONN. CORRIDOR	11	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	11	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
122	2 - Building B	100 CONN. CORRIDOR	3	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
123	2 - Building B	102 VESTIBULE	1	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
125	2 - Building B	103 OPEN COMP. LAB	34	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	34	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
127	2 - Building B	103 OPEN COMP.LAB	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
128	2 - Building B	103 OPEN COMP. LAB	3	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	3	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
129	2 - Building B	103 OPEN COMP. LAB	49	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	49	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
130	2 - Building B	103 OPEN COMP. LAB	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
133	2 - Building B	104 MAC LAB	6	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
134	2 - Building B	104 MAC LAB	4	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
135	2 - Building B	104 MAC LAB	6	CF32SI	Incandescent Fixture w/ 32w Screw-In Compact Fluorescent Lamp	6	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
136	2 - Building B	104 MAC LAB	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
137	2 - Building B	105 PC LAB	4	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
140	2 - Building B	105 PC LAB	4	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
141	2 - Building B	105 PC LAB	6	CF32SI	Incandescent Fixture w/ 32w Screw-In Compact Fluorescent Lamp	6	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
142	2 - Building B	105 PC LAB	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
143	2 - Building B	106 CORRIDOR	3	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
144	2 - Building B	106 CORRIDOR	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
145	2 - Building B	106 CORRIDOR	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
146	2 - Building B	106 CORRIDOR	4	UD41/T8L	4' Uplight/Downlight Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	4	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
147	2 - Building B	106 CORRIDOR	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
149	2 - Building B	107 OPEN OFFICE	2	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
150	2 - Building B	107 OPEN OFFICE	2	UD52/T8L	5' Uplight/Downlight Fluorescent w/ (2) F40T8 (40w) Lamp & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
151	2 - Building B	107 OPEN OFFICE	8	UD844/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
152	2 - Building B	107 OPEN OFFICE	8	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
153	2 - Building B	107 OPEN OFFICE	2	UD41/T8L	4' Uplight/Downlight Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
154	2 - Building B	107 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
155	2 - Building B	109 STORAGE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
156	2 - Building B	110 OFFICE	1	UD634/T8L	6' Uplight/Downlight Fluorescent w/(4) F25T8 Lamp & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
157	2 - Building B	110 OFFICE	1	UD842/T8L	8' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
158	2 - Building B	108 STORAGE	3	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	3	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
159	2 - Building B	111 VESTIBULE	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
160	2 - Building B	112 WOMEN	12	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
161	2 - Building B	115 HALL	2	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
162	2 - Building B	113 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
163	2 - Building B	114 ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
164	2 - Building B	115 MEN	6	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
165	2 - Building B	115 MEN	4	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
166	2 - Building B	115 MEN	3	CF26SI	Incandescent Fixture w/ 26w Screw-In Compact Fluorescent Lamp	3	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
167	2 - Building B	99 STAIR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
168	2 - Building B	99 STAIR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
169	2 - Building B	2 MECHANICAL	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast

170	2 - Building B	1B MECHANICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
171	2 - Building B	2 MECHANICAL	9	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
172	2 - Building B	2 MECHANICAL	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
173	2 - Building B	99 STAIR	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
174	2 - Building B	99 STAIR	1	W41/T8L	4' Wrap Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
175	2 - Building B	99 STAIR	1	W41/T8L	4' Wrap Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
176	3 - Building C	628 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
177	3 - Building C	630 CONFERENCE RM	6	BU62PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast , Parabolic Diff.	6	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
178	3 - Building C	630 CONFERENCE RM	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
179	3 - Building C	630 CONFERENCE RM	5	CF1X26	Compact Fluorescent Fixture w/ (1) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
180	3 - Building C	609 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
181	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
182	3 - Building C	614 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
183	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
184	3 - Building C	699 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
185	3 - Building C	605 FILE ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
186	3 - Building C	605A JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
187	3 - Building C	618 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
188	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
189	3 - Building C	620 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
190	3 - Building C	OPEN OFFICE	6	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	6	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
191	3 - Building C	699 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
192	3 - Building C	626 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
193	3 - Building C	627 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
194	3 - Building C	608 MEN	2	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
195	3 - Building C	608 MEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
196	3 - Building C	RECEPTION	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
197	3 - Building C	RECEPTION	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
198	3 - Building C	529 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
199	3 - Building C	530 CONFERENCE RM	4	BU62PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast , Parabolic Diff.	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
200	3 - Building C	530 CONFERENCE RM	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
201	3 - Building C	530 CONFERENCE RM	5	CF1X26	Compact Fluorescent Fixture w/ (1) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
202	3 - Building C	509 OFFICE	1	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
203	3 - Building C	RECEPTION	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
204	3 - Building C	RECEPTION	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
205	3 - Building C	510 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
206	3 - Building C	OPEN OFFICE	5	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	5	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
207	3 - Building C	OPEN OFFICE	5	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	5	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
208	3 - Building C	503 ELECTRICAL	1	W43/T8L	4' Wrap Fluorescent w/ (3) FO32T8 Lamps & (1) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
209	3 - Building C	504 WOMEN	3	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
210	3 - Building C	504 WOMEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
211	3 - Building C	599 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
212	3 - Building C	505 FILE ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
213	3 - Building C	519 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
214	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
215	3 - Building C	OPEN OFFICE	12	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	12	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
216	3 - Building C	599 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
217	3 - Building C	508 MEN	2	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
218	3 - Building C	508 MEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
219	3 - Building C	RECEPTION	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
220	3 - Building C	RECEPTION	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
221	3 - Building C	409 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
222	3 - Building C	OPEN OFFICE	5	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	5	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
223	3 - Building C	403 ELECTRICAL	1	W43/T8L	4' Wrap Fluorescent w/ (3) FO32T8 Lamps & (1) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
224	3 - Building C	404 WOMEN	3	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
225	3 - Building C	404 WOMEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
226	3 - Building C	OPEN OFFICE	8	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	8	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
227	3 - Building C	499 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
228	3 - Building C	405 FILE ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
229	3 - Building C	405A JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
230	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
231	3 - Building C	420 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
232	3 - Building C	OPEN OFFICE	9	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	9	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
233	3 - Building C	499 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
234	3 - Building C	408 MEN	2	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
235	3 - Building C	408 MEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
236	3 - Building C	428 FILE ROOM	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
237	3 - Building C	430 CONFERENCE RM	6	BU62PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast , Parabolic Diff.	6	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit

238	3 - Building C	430 CONFERENCE RM	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
239	3 - Building C	430 CONFERENCE RM	5	CF1X26	Compact Fluorescent Fixture w/ (1) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
240	3 - Building C	330 CONFERENCE RM	6	BU62PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast , Parabolic Diff.	6	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
241	3 - Building C	330 CONFERENCE RM	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
242	3 - Building C	330 CONFERENCE RM	5	CF1X26	Compact Fluorescent Fixture w/ (1) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
243	3 - Building C	RECEPTION	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
244	3 - Building C	RECEPTION	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
245	3 - Building C	309 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
246	3 - Building C	OPEN OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
247	3 - Building C	303 ELECTRICAL	1	W43/T8L	4' Wrap Fluorescent w/ (3) FO32T8 Lamps & (1) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
248	3 - Building C	304 WOMEN	3	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
249	3 - Building C	304 WOMEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
250	3 - Building C	FINANCE	5	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	5	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
251	3 - Building C	317 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
252	3 - Building C	318 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
253	3 - Building C	399 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
254	3 - Building C	305 BREAK ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
255	3 - Building C	306 FILE ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
256	3 - Building C	399 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
257	3 - Building C	STUDENT AFFAIRS	5	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	5	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
258	3 - Building C	308 MEN	3	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
259	3 - Building C	308 MEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
260	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
261	3 - Building C	220 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
262	3 - Building C	209 OPEN OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
263	3 - Building C	203 ELECTRICAL	1	W43/T8L	4' Wrap Fluorescent w/ (3) FO32T8 Lamps & (1) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
264	3 - Building C	204 WOMEN	3	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
265	3 - Building C	204 WOMEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
266	3 - Building C	210 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
267	3 - Building C	212 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
268	3 - Building C	299 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
269	3 - Building C	205A JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
270	3 - Building C	205 BREAK ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
271	3 - Building C	299 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
272	3 - Building C	216 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
273	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
274	3 - Building C	219 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
275	3 - Building C	208 MEN	2	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
276	3 - Building C	208 MEN	1	V632/T8L	6' Vanity Fixture w/ (2) F25T8 Lamps & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
277	3 - Building C	100 LOBBY	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
278	3 - Building C	102 OPEN OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
279	3 - Building C	110 OFFICE	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
280	3 - Building C	112 OFFICE	6	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	6	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
281	3 - Building C	108A ELECTRICAL	1	W43/T8L	4' Wrap Fluorescent w/ (3) FO32T8 Lamps & (1) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
282	3 - Building C	108 RESTROOM	1	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
283	3 - Building C	BREAK ROOM	2	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
284	3 - Building C	104 RESTROOM	1	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
285	3 - Building C	114 OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
286	3 - Building C	115 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
287	3 - Building C	OPEN OFFICE	4	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	4	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
288	3 - Building C	120 OFFICE	3	A43UD/T8L	2'x4' Recessed Direct/Indirect Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
289	3 - Building C	199 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
290	3 - Building C	105	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
291	3 - Building C		1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
292	3 - Building C	199 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
293	3 - Building C	106	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
294	3 - Building C	MECHANICAL	3	H844/T8L	8' Industrial Hood w/ (4) FO32T8 Lamps & (1) Electronic Ballast	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
295	3 - Building C	MECHANICAL	9	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
296	3 - Building C	MECHANICAL	1	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
297	3 - Building C	42 MECHANICAL	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
298	3 - Building C	STORAGE	3	W44/EE	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
299	3 - Building C	MECHANICAL	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
300	4 - Building D	203 OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
301	4 - Building D	202 OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
302	4 - Building D	200 FINANCIAL AID	33	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	33	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
303	4 - Building D	200 FINANCIAL AID	1	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diff.	1	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
304	4 - Building D	200 FINANCIAL AID	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
305	4 - Building D	204 COPY ROOM	3	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

306	4 - Building D	204A STORAGE	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
307	4 - Building D	101 LOBBY	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
308	4 - Building D	101 LOBBY	3	MH175DL	HID Downlight Fixture w/ (1) 175w Metal Halide Lamp & Ballast	3	2X32HDLR-10/I	New Downlight Fixture w/ (2) 32w CF Lamps & Electronic Ballasts
309	4 - Building D	101 LOBBY	15	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	15	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
310	4 - Building D	101 LOBBY	2	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	2	N/R	No Retrofit Proposed
311	4 - Building D	101 LOBBY	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
312	4 - Building D	107 OFFICE	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
313	4 - Building D	101J JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
314	4 - Building D	105 MEN	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
315	4 - Building D	105 MEN	1	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	1	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
316	4 - Building D	108 OFFICE	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
317	4 - Building D	106 WOMEN	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
318	4 - Building D	106 WOMEN	1	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	1	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
319	4 - Building D	101G FRONT DESK AREA	7	C42P/T8L	1'x4' Pendant Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
321	4 - Building D	101D OPEN OFFICE	16	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	16	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
322	4 - Building D	101D OPEN OFFICE	4	BU32X/T8L	2'x2' Surface Mounted Box w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
323	4 - Building D	101D OPEN OFFICE	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
324	4 - Building D	101E OPEN OFFICE	12	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
325	4 - Building D	111 OPEN OFFICE	20	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	20	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
326	4 - Building D	111 OPEN OFFICE	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
327	4 - Building D	111A OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
328	4 - Building D	112 CORRIDOR	1	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
329	4 - Building D	112 CORRIDOR	7	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	7	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
330	4 - Building D	112 CORRIDOR	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
331	4 - Building D	120 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
332	4 - Building D	121 OFFICE	6	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	6	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
333	4 - Building D	122 OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
334	4 - Building D	123 OFFICE	3	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	3	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
335	4 - Building D	113A CONFERENCE RM	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
336	4 - Building D	113 OPEN OFFICE	12	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
337	4 - Building D	113 OPEN OFFICE	2	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	2	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
338	4 - Building D	113 OPEN OFFICE	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
339	4 - Building D	101A OPEN OFFICE	5	C42P/T8L	1'x4' Pendant Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
341	4 - Building D	101A OPEN OFFICE	4	BU32X/T8L	2'x2' Surface Mounted Box w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
342	4 - Building D	101A OPEN OFFICE	15	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	15	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
343	4 - Building D	101K VAULT	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
344	4 - Building D	101BC OPEN OFFICE	17	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	17	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
345	4 - Building D	101BC OPEN OFFICE	1	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	1	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
346	4 - Building D	138 OPEN OFFICE	19	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	19	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
347	4 - Building D	138 OPEN OFFICE	6	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	6	N/R	No Retrofit Proposed
348	4 - Building D	138 OPEN OFFICE	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
349	4 - Building D	136 OPEN OFFICE	9	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	9	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
350	4 - Building D	130 RECEPTION	7	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	7	N/R	No Retrofit Proposed
351	4 - Building D	130 RECEPTION	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
352	4 - Building D	133 OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
353	4 - Building D	132 OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
354	4 - Building D	131 OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
355	4 - Building D	103 CONFERENCE RM	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
356	4 - Building D	104 OPEN OFFICE	8	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
357	4 - Building D	104 OPEN OFFICE	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
358	4 - Building D	104A TESTING	6	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
359	4 - Building D	104A TESTING	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
360	4 - Building D	104B TESTING	6	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
361	4 - Building D	104B TESTING	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
362	4 - Building D	115 PERIMETER CORRIDOI	57	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	57	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
363	4 - Building D	115 PERIMETER CORRIDOI	4	D44X/T8L	4'x4' Surface Mounted Box w/ (4) FO32T8 Lamps & (1) Electronic Ballast	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
364	4 - Building D	115 PERIMETER CORRIDOI	31	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	31	N/R	No Retrofit Proposed
365	4 - Building D	115 PERIMETER CORRIDOI	22	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	22	N/R	No Retrofit Proposed
366	4 - Building D	115 PERIMETER CORRIDOI	2	E4X25	Exit Sign w/ (4) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
367	4 - Building D	115 PERIMETER CORRIDOI	5	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	5	N/R	No Retrofit Proposed
368	4 - Building D	115X CONN. BLDG D TO A	6	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
369	4 - Building D	115X CONN. BLDG D TO A	2	A42DD/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
370	4 - Building D	99 STAIR	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
371	4 - Building D	28 CORRIDOR	8	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
372	4 - Building D	28 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
373	4 - Building D	29 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
374	4 - Building D	39 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
375	4 - Building D	39A OFFICE	6	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	6	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit

376	4 - Building D	20 CORRIDOR	6	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
377	4 - Building D	20 CORRIDOR	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
378	4 - Building D	11 OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
379	4 - Building D	13 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
380	4 - Building D	12 OPEN OFFICE	8	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
381	4 - Building D	13A OFFICE	3	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
382	4 - Building D	15 FILE ROOM	6	b23pb/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	6	N/R	No Retrofit Proposed
383	4 - Building D	14 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
384	4 - Building D	17 OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
385	4 - Building D	16 OFFICE	6	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
386	4 - Building D	17A OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
387	4 - Building D	18 OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
388	4 - Building D	18A OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
389	4 - Building D	19 OFFICE	6	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
390	4 - Building D	24 OPEN OFFICE	6	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
391	4 - Building D	24A OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
392	4 - Building D	24B OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
393	4 - Building D	24C OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
394	4 - Building D	24D OFFICE	1	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
395	4 - Building D	24E OFFICE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
396	4 - Building D	24F OFFICE	1	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
397	4 - Building D	26 STORAGE	11	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	11	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
398	4 - Building D	37 RESTROOM	1	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
399	4 - Building D	38 RESTROOM	1	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
400	4 - Building D	25 STORAGE	7	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
401	4 - Building D	27 CORRIDOR	4	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
402	4 - Building D	27 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
403	4 - Building D	27A JANITOR	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
404	4 - Building D	96 ELEV. MACHINE ROOM	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
405	4 - Building D	33 CORRIDOR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
406	4 - Building D	33 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
407	4 - Building D	23 MECHANICAL	8	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
408	4 - Building D	23 MECHANICAL	1	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
409	4 - Building D	23 MECHANICAL	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
410	4 - Building D	21 STORAGE	9	S844/EE	8' Strip Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	9	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
411	4 - Building D	21 STORAGE	1	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
412	4 - Building D	21 STORAGE	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
421	4 - Building D	32 STORAGE	2	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
422	4 - Building D	4 WORK AREA	65	S842/EE	8' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	65	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
423	4 - Building D	4 WORK AREA	11	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	11	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
424	4 - Building D	4 WORK AREA	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
425	4 - Building D	7 OPEN OFFICE	25	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	25	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
426	4 - Building D	7 OPEN OFFICE	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
427	4 - Building D	6 CONFERENCE ROOM	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
428	4 - Building D	3 ELECTRICAL	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
429	5 - Building E	202 CORRIDOR	10	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	10	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
430	5 - Building E	202 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
431	5 - Building E	220 CONTROLLER'S OFFIC	42	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	42	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
432	5 - Building E	220 CONTROLLER'S OFFIC	5	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	5	N/R	No Retrofit Proposed
433	5 - Building E	225 OFFICE	2	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	2	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
434	5 - Building E	223 OFFICE	4	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
435	5 - Building E	224 OFFICE	2	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	2	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
436	5 - Building E	221 OFFICE	4	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
437	5 - Building E	208 OFFICE	4	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
438	5 - Building E	CORRIDOR	3	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	3	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
439	5 - Building E	210 OFFICE	4	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
440	5 - Building E	207 OPEN OFFICE	28	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	28	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
441	5 - Building E	207 OPEN OFFICE	1	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	1	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
442	5 - Building E	207 OPEN OFFICE	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
443	5 - Building E	211 OFFICE	4	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
444	5 - Building E	218 OFFICE	2	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	2	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
445	5 - Building E	214A COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
446	5 - Building E	201 CORRIDOR	7	BU32/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast	7	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
447	5 - Building E	201 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
448	5 - Building E	120 BOOK STORE	68	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	68	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
449	5 - Building E	120 BOOK STORE	7	MH400HB	HID High Bay Fixture w/ (1) 400w Metal Halide Lamp & Ballast	7	a44xh	New 4' Surface Mounted Box w/ (4) F28T8 Lamps & (1) 4/32 Elec. High-Power Ballasts
450	5 - Building E	120 BOOK STORE	7	MH400HB	HID High Bay Fixture w/ (1) 400w Metal Halide Lamp & Ballast	7	a44xh	New 4' Surface Mounted Box w/ (4) F28T8 Lamps & (1) 4/32 Elec. High-Power Ballasts
451	5 - Building E	120 BOOK STORE	8	I1X50R30	Incandescent Fixture w/ (1) 50w Incandescent ER or BR Lamp	8	CF15R30SI	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector

452	5 - Building E	120 BOOK STORE	0	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	0	N/R	No Retrofit Proposed
453	5 - Building E	123 WORK AREA	7	A44DS/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts, Dual	7	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
454	5 - Building E	125 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
455	5 - Building E	124 STORAGE	2	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
456	5 - Building E	122 OFFICE	2	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
457	5 - Building E	123A STORAGE	8	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
458	5 - Building E	34 BOOK STORE STORAGE	14	IC42/EE	4' Fluorescent Ice Tray w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	14	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
459	5 - Building E	31 CORRIDOR	8	IC42/EE	4' Fluorescent Ice Tray w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
460	5 - Building E	31 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
461	5 - Building E	107 JANITOR	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
462	5 - Building E	201B LIGHTING ROOM	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
463	5 - Building E	CATWALKS	18	I1X60J	Incandescent Jelly Jar Fixture w/ (1) 60w Incandescent Lamp	18	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
464	5 - Building E	STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
465	5 - Building E	107 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
466	5 - Building E	105 AV STORAGE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
467	5 - Building E	106 OFFICE	6	BU62PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast , Parabolic Diffuser	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
468	5 - Building E	106A OFFICE	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
469	5 - Building E	108 NEW MEDIA CENTER	6	BU62PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast , Parabolic Diffuser	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
470	5 - Building E	108A	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
471	5 - Building E	109 OFFICE	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
472	5 - Building E	110 OFFICE	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
473	5 - Building E	108B OFFICE	6	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
474	5 - Building E	111 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
475	5 - Building E	111B STORAGE	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
476	5 - Building E	112 CLASS	18	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	18	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
477	5 - Building E	112A CONTROL ROOM	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
478	5 - Building E	193 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
479	5 - Building E	106N ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
480	5 - Building E	113 COMM	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
481	5 - Building E	127 CORRIDOR	18	A42DD/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	18	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
482	5 - Building E	127 CORRIDOR	16	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	16	N/R	No Retrofit Proposed
483	5 - Building E	101 CORRIDOR	24	A42DD/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	24	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
484	5 - Building E	101 CORRIDOR	24	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	24	N/R	No Retrofit Proposed
485	5 - Building E	101 CORRIDOR	27	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	27	f2x26hdlr-7.5/d	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
486	5 - Building E	101 CORRIDOR	8	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
487	5 - Building E	101 CORRIDOR	4	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	4	N/R	No Retrofit Proposed
488	5 - Building E	102A VESTIBULE	1	D46X/T8L	4'x4' Surface Mounted Box Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	1	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
489	5 - Building E	102A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
490	5 - Building E	102 CORRIDOR	12	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
491	5 - Building E	102 CORRIDOR	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
492	5 - Building E	103A VESTIBULE	1	D46X/T8L	4'x4' Surface Mounted Box Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	1	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
493	5 - Building E	103A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
494	5 - Building E	103 CORRIDOR	24	A42DD/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	24	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
495	5 - Building E	103 CORRIDOR	17	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	17	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
496	5 - Building E	103 CORRIDOR	24	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	24	N/R	No Retrofit Proposed
497	5 - Building E	103 CORRIDOR	5	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	5	N/R	No Retrofit Proposed
498	5 - Building E	106 CORRIDOR	20	A42DD/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	20	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
499	5 - Building E	106 CORRIDOR	18	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	18	N/R	No Retrofit Proposed
500	5 - Building E	106 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
501	5 - Building E	49 NEWSPAPER	8	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
502	5 - Building E	49A NEWSPAPER	5	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
503	5 - Building E	47 OFFICE	2	a42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
504	5 - Building E	47A OFFICE	2	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
505	5 - Building E	47B OFFICE	2	a42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
506	5 - Building E	47C OFFICE	2	a42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
507	5 - Building E	43 OFFICE	2	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
508	5 - Building E	41 MAGAZINE	6	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
509	5 - Building E	41B OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
510	5 - Building E	36 OFFICE	3	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
511	5 - Building E	37 OFFICE	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
512	5 - Building E	38 OFFICE	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
513	5 - Building E	39 OFFICE	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
514	5 - Building E	35 OFFICE	4	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
515	5 - Building E	81 HEALTH SERVICES	5	A42X/T8L	2'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
516	5 - Building E	81 HEALTH SERVICES	2	A44X/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
517	5 - Building E	81 HEALTH SERVICES	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
518	5 - Building E	81A OFFICE	4	A44X/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
519	5 - Building E	81B OFFICE	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

520	5 - Building E	55 VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
521	5 - Building E	55A EXAM ROOM	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
522	5 - Building E	55B OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
523	5 - Building E	56 STORAGE	12	A42X/T8L	2'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
524	5 - Building E	50 STUDENT LOUNGE	26	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	26	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
525	5 - Building E	50 STUDENT LOUNGE	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
526	5 - Building E	50B STUDENT LOUNGE	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
527	5 - Building E	50C STUDENT LOUNGE	3	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
528	5 - Building E	50A STUDENT LOUNGE	6	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
529	5 - Building E	50D CORRIDOR	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
530	5 - Building E	82 RADIO LOUNGE	1	IC844/EE	8' Fluorescent Ice Tray w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
531	5 - Building E	82 RADIO LOUNGE	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
532	5 - Building E	83A CD STORAGE	1	IC844/EE	8' Fluorescent Ice Tray w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
533	5 - Building E	83 STUDIO	1	IC844/EE	8' Fluorescent Ice Tray w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
534	5 - Building E	89 PIANO LOUNGE	1	IC844/EE	8' Fluorescent Ice Tray w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
535	5 - Building E	80 STUDIO	1	IC844/EE	8' Fluorescent Ice Tray w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
536	5 - Building E	88A OFFICE	2	IC42/T8L	4' Fluorescent Ice Tray w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
537	5 - Building E	88 ALBUM STORAGE	3	IC42/EE	4' Fluorescent Ice Tray w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
538	5 - Building E	88 ALBUM STORAGE	1	IC42/T8L	4' Fluorescent Ice Tray w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
539	5 - Building E	88 ALBUM STORAGE	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
540	5 - Building E	80 ELECTRICAL	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
541	5 - Building E	38 MECHANICAL	12	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
542	5 - Building E	38 MECHANICAL	3	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
543	5 - Building E	10A RESTROOM	1	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
544	5 - Building E	93 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
545	5 - Building E	16 OFFICE	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
546	5 - Building E	17 TECH SUPPORT	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
547	5 - Building E	9 TECH OFFICE	4	s42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
548	5 - Building E	8 GREEN ROOM	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
549	5 - Building E	7 INSTRUMENT STORAGE	12	h42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
550	5 - Building E	5 INSTRUMENT STORAGE	7	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
551	5 - Building E	20 FLAT STORAGE	2	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
552	5 - Building E	3A DRESSING ROOM - WOI	7	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	7	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
553	5 - Building E	3A DRESSING ROOM - WOI	23	I1X40VAN	Incandescent Vanity Fixture w/ (1) 40w Incandescent Lamp	23	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
554	5 - Building E	3B RESTROOM	1	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	1	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
555	5 - Building E	2A DRESSING ROOM - MEN	5	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
556	5 - Building E	2A DRESSING ROOM - MEN	23	I1X40VAN	Incandescent Vanity Fixture w/ (1) 40w Incandescent Lamp	23	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
557	5 - Building E	2B RESTROOM	1	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	1	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
558	5 - Building E	74 CORRIDOR	3	C42/EE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
559	5 - Building E	74 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
560	5 - Building E	48 CORRIDOR	9	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
561	5 - Building E	48 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
562	5 - Building E	84 CORRIDOR	1	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
563	5 - Building E	63 CAGE STORAGE	6	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
564	5 - Building E	85 CORRIDOR	1	C42X/EE	1'x4' Surface Mounted Box w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
565	7 - Building H	1E CONTROL ROOM	3	A42/EE	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
566	7 - Building H	1 CHILLER - MECHANICAL	8	MH400HB	HID High Bay Fixture w/ (1) 400w Metal Halide Lamp & Ballast	8	\46T5HO/POL\	New 2'x4' Recessed Troffer w/ (6) F54T5HO Lamps & (3) 2/54 T5 Elec. HO Ballasts
567	7 - Building H	1 CHILLER - MECHANICAL	13	MH175WP	HID Wall Pack Fixture w/ (1) 175w Metal Halide Lamp & Ballast	13	N/R	No Retrofit Proposed
568	7 - Building H	1 CHILLER - MECHANICAL	7	H844/T8L	8' Industrial Hood w/ (4) FO32T8 Lamps & (1) Electronic Ballast	7	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
569	7 - Building H	1 CHILLER - MECHANICAL	9	H844/EE	8' Industrial Hood w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	9	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
570	7 - Building H	1 CHILLER - MECHANICAL	5	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
571	7 - Building H	1 CHILLER - MECHANICAL	3	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
572	7 - Building H	1 CHILLER - MECHANICAL	7	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
573	7 - Building H	1 CHILLER - MECHANICAL	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
574	7 - Building H	1 MURRAY OFFICE	2	A43X/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (2) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
575	7 - Building H	2 ENGINEER CONTROL RM	8	W44/T8L	4' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
576	7 - Building H	9A LOCKER STORAGE	5	H844/EE	8' Industrial Hood w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	5	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
577	7 - Building H	3B COGEN ENGINE ROOM	4	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
578	7 - Building H	3A COMPRESSOR ROOM	2	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
579	7 - Building H	3A COMPRESSION ROOM	7	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
580	7 - Building H	3A COMPRESSION ROOM	3	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
581	7 - Building H	3A COMPRESSION ROOM	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
582	7 - Building H	3 BOILER ROOM	7	H844/EE	8' Industrial Hood w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	7	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
583	7 - Building H	3 BOILER ROOM	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
584	7 - Building H	3 BOILER ROOM	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
585	7 - Building H	9 RECYCLING	2	W844/T8L	8' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
586	7 - Building H	4 CORRIDOR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
587	7 - Building H	4 CORRIDOR	2	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast

588	7 - Building H	4 CORRIDOR	10	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	10	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
589	7 - Building H	4A STORAGE	3	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
590	7 - Building H	4A STORAGE	1	C42X/EE	1'x4' Surface Mounted Box w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
591	7 - Building H	4A STORAGE	1	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
592	7 - Building H	6 OFFICE	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
593	7 - Building H	6A STORAGE	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
594	7 - Building H	7 CORRIDOR	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
595	7 - Building H	7 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
596	7 - Building H	8 RAISED DOCK	3	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
597	7 - Building H	103A LOBBY	3	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	3	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
598	7 - Building H	103A LOBBY	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
599	7 - Building H	101 MECHANICAL	9	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
600	7 - Building H	101 MECHANICAL	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
601	7 - Building H	101 MECHANICAL	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
602	7 - Building H	101B TRAINING ROOM	4	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
603	7 - Building H	105 MAIN OFFICE	10	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	10	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
604	7 - Building H	104 CORRIDOR	9	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	9	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
605	7 - Building H	106 OFFICE	8	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	8	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
606	7 - Building H	108 OFFICE	5	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	5	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
607	7 - Building H	109 OFFICE	5	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	5	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
608	7 - Building H	110 OFFICE	5	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	5	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
609	7 - Building H	111 WOMEN	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
610	7 - Building H	111 WOMEN	1	V22/SS	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
611	7 - Building H	104B CORRIDOR	5	BU62/EE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	5	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
612	7 - Building H	104B CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
613	7 - Building H	115 MEN	2	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
614	7 - Building H	115 MEN	2	V32/SS	3' Vanity Fixture w/ (2) F30T12 Lamps & (1) Standard Magnetic Ballast	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
615	7 - Building H	115 MEN	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
616	7 - Building H	115 LOCKER ROOM	6	C42/EE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
617	7 - Building H	114 MECHANICAL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
618	8 - Fine Arts Building	202 CLASS	21	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	21	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
619	8 - Fine Arts Building	202 CLASS	7	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	7	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
620	8 - Fine Arts Building	201 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
621	8 - Fine Arts Building	206A OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
622	8 - Fine Arts Building	206 DRAWING STUDIO	14	UP844/T8L	8' Uplight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	14	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
623	8 - Fine Arts Building	206 DRAWING STUDIO	4	UP42/T8L	4' Uplight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
624	8 - Fine Arts Building	206 DRAWING STUDIO	6	I1X65R30TR	Incandescent Track Fixture w/ (1) 65w Incandescent ER or BR Lamp	6	CF15R30SI	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector
625	8 - Fine Arts Building	206B STORAGE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
626	8 - Fine Arts Building	206C STORAGE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
627	8 - Fine Arts Building	212C STORAGE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
628	8 - Fine Arts Building	212 PAINTING STUDIO	14	UP844/T8L	8' Uplight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	14	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
629	8 - Fine Arts Building	212 PAINTING STUDIO	4	UP42/T8L	4' Uplight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
630	8 - Fine Arts Building	212 PAINTING STUDIO	11	I1X65R30TR	Incandescent Track Fixture w/ (1) 65w Incandescent ER or BR Lamp	11	CF15R30SI	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector
631	8 - Fine Arts Building	212B OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
632	8 - Fine Arts Building	217 GALLERY	1	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
633	8 - Fine Arts Building	217 GALLERY	5	MH250	HID Fixture w/ (1) 250w Metal Halide Lamp & Ballast	5	N/R	No Retrofit Proposed
634	8 - Fine Arts Building	215A SCULPTURE	7	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	7	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
635	8 - Fine Arts Building	215A SCULPTURE	3	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	3	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
636	8 - Fine Arts Building	215B OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
637	8 - Fine Arts Building	215C FIGURE MODELING	8	UP844/T8L	8' Uplight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
638	8 - Fine Arts Building	215C FIGURE MODELING	2	UP42/T8L	4' Uplight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
639	8 - Fine Arts Building	215C FIGURE MODELING	9	I1X60TR	Incandescent Track Light Fixture w/ (1) 60w Incandescent Lamp	9	CF15R30SI	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector
640	8 - Fine Arts Building	215D WAX/RESIN	4	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
641	8 - Fine Arts Building	215F PLASTER	3	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	3	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
642	8 - Fine Arts Building	219 WOODSHOP	10	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	10	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
643	8 - Fine Arts Building	219 WOODSHOP	11	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	11	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
644	8 - Fine Arts Building	219B TOOL ROOM	2	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
645	8 - Fine Arts Building	219C METAL WORK	8	A43XDS/T8L	2'x4' Suface Mounted Box w/ (3) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	8	LB43LDS	Relamp & Reballast w/ (3) F32T8, (1) 2/32 Elec. LP & (1) 1/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
646	8 - Fine Arts Building	201 CORRIDOR	13	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	13	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
647	8 - Fine Arts Building	201 CORRIDOR	2	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
648	8 - Fine Arts Building	201 CORRIDOR	4	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	4	N/R	No Retrofit Proposed
649	8 - Fine Arts Building	203 CLASS	15	UD844DIM/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast, Dimmer Cont.	15	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
650	8 - Fine Arts Building	203 CLASS	7	ud42dimds/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dimmer Controlle	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
651	8 - Fine Arts Building	207 LOCKERS	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
652	8 - Fine Arts Building	208 STORAGE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
653	8 - Fine Arts Building	210 ELECTRICAL	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
654	8 - Fine Arts Building	211 COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
655	8 - Fine Arts Building	214 SOLVENT STORAGE	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

656	8 - Fine Arts Building	214A OFFICE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
657	8 - Fine Arts Building	224 EQUIPMENT	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
658	8 - Fine Arts Building	248 MEN	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
659	8 - Fine Arts Building	248 MEN	4	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
660	8 - Fine Arts Building	248 MEN	5	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	N/R	No Retrofit Proposed
661	8 - Fine Arts Building	249 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
662	8 - Fine Arts Building	251 WOMEN	5	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
663	8 - Fine Arts Building	251 WOMEN	5	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	5	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
664	8 - Fine Arts Building	251 WOMEN	6	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	6	N/R	No Retrofit Proposed
665	8 - Fine Arts Building	254 COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
666	8 - Fine Arts Building	258 UPPER LOBBY	7	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	7	f2x26hdlr-7.5/d	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
667	8 - Fine Arts Building	258 UPPER LOBBY	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
668	8 - Fine Arts Building	259A VESTIBULE	1	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	1	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
669	8 - Fine Arts Building	259A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
670	8 - Fine Arts Building	257A VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
671	8 - Fine Arts Building	257A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
672	8 - Fine Arts Building	257 CORRIDOR	5	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
673	8 - Fine Arts Building	257 CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
674	8 - Fine Arts Building	295 STAIR	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
675	8 - Fine Arts Building	255 CLASS	5	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	5	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
676	8 - Fine Arts Building	255 CLASS	5	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	5	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
677	8 - Fine Arts Building	256 CLASS	5	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	5	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
678	8 - Fine Arts Building	256 CLASS	5	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	5	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
679	8 - Fine Arts Building	253 ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
680	8 - Fine Arts Building	252 DESIGN STUDIO	12	UP844/T8L	8' Uplight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	12	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
681	8 - Fine Arts Building	252 DESIGN STUDIO	6	UP42/T8L	4' Uplight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
682	8 - Fine Arts Building	252 DESIGN STUDIO	12	I1X65R30TR	Incandescent Track Fixture w/ (1) 65w Incandescent ER or BR Lamp	12	CF15R30SI	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector
683	8 - Fine Arts Building	252 DESIGN STUDIO	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
684	8 - Fine Arts Building	252B OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
685	8 - Fine Arts Building	250 PRINTMAKING STUDIO	30	UP44/T8L	4' Uplight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	30	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
686	8 - Fine Arts Building	250 PRINTMAKING STUDIO	4	UP34/T8L	3' Uplight Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	4	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
687	8 - Fine Arts Building	250 PRINTMAKING STUDIO	13	I1X65R30TR	Incandescent Track Fixture w/ (1) 65w Incandescent ER or BR Lamp	13	CF15R30SI	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector
688	8 - Fine Arts Building	250 PRINTMAKING STUDIO	14	FT1X40B	2'x2' Recessed Troffer w/ (1) FT40T5 Lamp & Electronic Ballast	14	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
689	8 - Fine Arts Building	250 PRINTMAKING STUDIO	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
690	8 - Fine Arts Building	250B ACID ROOM	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
691	8 - Fine Arts Building	247 CLASS	5	UD844DIM/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast, Dimmer Controll	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
692	8 - Fine Arts Building	247 CLASS	5	ud42dimds/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dimmer Controlle	5	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
693	8 - Fine Arts Building	259 UPPER CORRIDOR GAI	7	MH250	HID Fixture w/ (1) 250w Metal Halide Lamp & Ballast	7	N/R	No Retrofit Proposed
694	8 - Fine Arts Building	259 UPPER CORRIDOR GAI	11	MH250	HID Fixture w/ (1) 250w Metal Halide Lamp & Ballast	11	N/R	No Retrofit Proposed
695	8 - Fine Arts Building	259 UPPER CORRIDOR GAI	3	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	3	f2x26hdlr-7.5/d	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
696	8 - Fine Arts Building	259 UPPER CORRIDOR GAI	66	CF1X26	Compact Fluorescent Fixture w/ (1) 26w Compact Fluorescent Lamp & Magnetic Ballast	66	N/R	No Retrofit Proposed
697	8 - Fine Arts Building	259 UPPER CORRIDOR GAI	4	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
698	8 - Fine Arts Building	259 UPPER CORRIDOR GAI	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
699	8 - Fine Arts Building	246 CORRIDOR	9	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	9	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
700	8 - Fine Arts Building	246 CORRIDOR	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
701	8 - Fine Arts Building	228 CONFERENCE ROOM	4	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
702	8 - Fine Arts Building	229 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
703	8 - Fine Arts Building	230 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
704	8 - Fine Arts Building	231 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
705	8 - Fine Arts Building	232 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
706	8 - Fine Arts Building	233 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
707	8 - Fine Arts Building	234 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
708	8 - Fine Arts Building	235 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
709	8 - Fine Arts Building	236 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
710	8 - Fine Arts Building	237 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
711	8 - Fine Arts Building	238 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
712	8 - Fine Arts Building	239A CLOSET	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
713	8 - Fine Arts Building	239 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
714	8 - Fine Arts Building	240 OFFICE	4	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
715	8 - Fine Arts Building	241 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
716	8 - Fine Arts Building	242 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
717	8 - Fine Arts Building	243 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
718	8 - Fine Arts Building	244 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
719	8 - Fine Arts Building	250C OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
720	8 - Fine Arts Building	226 COMPUTER GRAPHICS	15	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	15	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
721	8 - Fine Arts Building	226 COMPUTER GRAPHICS	6	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	6	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
722	8 - Fine Arts Building	226C OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
723	8 - Fine Arts Building	225C FILM PROCESSING	4	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

724	8 - Fine Arts Building	225C FILM PROCESSING	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
725	8 - Fine Arts Building	225C FILM PROCESSING	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
726	8 - Fine Arts Building	225A PHOTOGRAPHY STUI	10	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	10	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
727	8 - Fine Arts Building	225A PHOTOGRAPHY STUI	2	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	2	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
728	8 - Fine Arts Building	225A PHOTOGRAPHY STUI	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
729	8 - Fine Arts Building	225B OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
730	8 - Fine Arts Building	223 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
731	8 - Fine Arts Building	222 WOMEN	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
732	8 - Fine Arts Building	222 WOMEN	2	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
733	8 - Fine Arts Building	222 WOMEN	3	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	3	N/R	No Retrofit Proposed
734	8 - Fine Arts Building	221 MEN	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
735	8 - Fine Arts Building	221 MEN	2	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
736	8 - Fine Arts Building	221 MEN	3	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	3	N/R	No Retrofit Proposed
737	8 - Fine Arts Building	216 CLASS	3	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	3	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
738	8 - Fine Arts Building	216 CLASS	4	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	4	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
739	8 - Fine Arts Building	218 CLASS	3	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	3	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
740	8 - Fine Arts Building	218 CLASS	4	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	4	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
741	8 - Fine Arts Building	201A CORRIDOR	2	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
742	8 - Fine Arts Building	201A CORRIDOR	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
743	8 - Fine Arts Building	293 STAIR	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
744	8 - Fine Arts Building	107 CLASS	15	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	15	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
745	8 - Fine Arts Building	107 CLASS	7	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	7	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
746	8 - Fine Arts Building	107A STORAGE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
747	8 - Fine Arts Building	104 CLASS	8	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	8	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
748	8 - Fine Arts Building	104 CLASS	4	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	4	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
749	8 - Fine Arts Building	104 CLASS	6	I1X75R40	Incandescent Fixture w/ (1) 75w Incandescent Lamp	6	CF20R40SI	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ R40 Reflector
750	8 - Fine Arts Building	103 WOMEN	5	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
751	8 - Fine Arts Building	103 WOMEN	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	N/R	No Retrofit Proposed
752	8 - Fine Arts Building	102 MEN	5	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
753	8 - Fine Arts Building	102 MEN	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	N/R	No Retrofit Proposed
754	8 - Fine Arts Building	101B CORRIDOR	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
755	8 - Fine Arts Building	101B CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
756	8 - Fine Arts Building	191 STAIR	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
757	8 - Fine Arts Building	191 STAIR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
758	8 - Fine Arts Building	101A VESTIBULE	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
759	8 - Fine Arts Building	101A VESTIBULE	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
760	8 - Fine Arts Building	101A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
761	8 - Fine Arts Building	105A OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
762	8 - Fine Arts Building	105B OFFICE	4	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
763	8 - Fine Arts Building	103C OFFICE	4	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
764	8 - Fine Arts Building	106A WORK ROOM	6	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
765	8 - Fine Arts Building	106B STORAGE	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
766	8 - Fine Arts Building	105 CORRIDOR	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
767	8 - Fine Arts Building	105 CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
768	8 - Fine Arts Building	108 CLASS	10	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	10	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
769	8 - Fine Arts Building	108 CLASS	5	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	5	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
770	8 - Fine Arts Building	112 JEWELRY STUDIO	11	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	11	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
771	8 - Fine Arts Building	112 JEWELRY STUDIO	10	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	10	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
772	8 - Fine Arts Building	112 JEWELRY STUDIO	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
773	8 - Fine Arts Building	112B OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
774	8 - Fine Arts Building	112C PLATE ROOM	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
775	8 - Fine Arts Building	112D HAMMER ROOM	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
776	8 - Fine Arts Building	114 CERAMIC STUDIO	18	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	18	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
777	8 - Fine Arts Building	114 CERAMIC STUDIO	6	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	6	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
778	8 - Fine Arts Building	114 CERAMIC STUDIO	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
779	8 - Fine Arts Building	114J CORRIDOR	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
780	8 - Fine Arts Building	114F OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
781	8 - Fine Arts Building	114F OFFICE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
782	8 - Fine Arts Building	114C GLAZE ROOM	3	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
783	8 - Fine Arts Building	114D CLAY ROOM	3	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
784	8 - Fine Arts Building	114E KILN ROOM	8	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
785	8 - Fine Arts Building	114E KILN ROOM	2	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	2	N/R	No Retrofit Proposed
786	8 - Fine Arts Building	114E KILN ROOM	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
787	8 - Fine Arts Building	193 STAIR	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
788	8 - Fine Arts Building	193 STAIR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
789	8 - Fine Arts Building	101D VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
790	8 - Fine Arts Building	101D VESTIBULE	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
791	8 - Fine Arts Building	101D VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed

792	8 - Fine Arts Building	113 OFFICE	3	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
793	8 - Fine Arts Building	113 OFFICE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
794	8 - Fine Arts Building	101 CORRIDOR	12	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
795	8 - Fine Arts Building	101 CORRIDOR	3	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	3	N/R	No Retrofit Proposed
796	8 - Fine Arts Building	109 COPY	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
797	8 - Fine Arts Building	110 ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
798	8 - Fine Arts Building	111 COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
799	8 - Fine Arts Building	141G VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
800	8 - Fine Arts Building	141G VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
801	8 - Fine Arts Building	141E MENS DRESSING RO(	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
802	8 - Fine Arts Building	141E MENS DRESSING RO(	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
803	8 - Fine Arts Building	141E MENS DRESSING RO(	2	CF1X18	Compact Fluorescent Fixture w/ (1) 18w Compact Fluorescent Lamp & Magnetic Ballast	2	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
804	8 - Fine Arts Building	141E MENS DRESSING RO(	10	I1X60VAN	Incandescent Vanity Fixture w/ (1) 60w Incandescent Lamp	10	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
805	8 - Fine Arts Building	141F WOMENS DRESSING	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
806	8 - Fine Arts Building	141F WOMENS DRESSING	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
807	8 - Fine Arts Building	141F WOMENS DRESSING	2	CF1X18	Compact Fluorescent Fixture w/ (1) 18w Compact Fluorescent Lamp & Magnetic Ballast	2	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
808	8 - Fine Arts Building	141F WOMENS DRESSING	10	I1X60VAN	Incandescent Vanity Fixture w/ (1) 60w Incandescent Lamp	10	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
809	8 - Fine Arts Building	141A DANCE STUDIO	38	UD43DS/T8L	4' Uplight/Downlight Fluorescent w/ (3) F32T8 Lamps & (2) Electronic Ballasts, Dual Switched	38	LB43LDS	Relamp & Reballast w/ (3) F32T8, (1) 2/32 Elec. LP & (1) 1/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
810	8 - Fine Arts Building	141A DANCE STUDIO	2	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	2	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
811	8 - Fine Arts Building	141A DANCE STUDIO	3	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	3	N/R	No Retrofit Proposed
812	8 - Fine Arts Building	141A DANCE STUDIO	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
813	8 - Fine Arts Building	141B VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
814	8 - Fine Arts Building	141B VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
815	8 - Fine Arts Building	141C OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
816	8 - Fine Arts Building	141D OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
817	8 - Fine Arts Building	144B VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
818	8 - Fine Arts Building	144A INSTRUMENTAL REHI	26	UD43DS/T8L	4' Uplight/Downlight Fluorescent w/ (3) F32T8 Lamps & (2) Electronic Ballasts, Dual Switched	26	LB43LDS	Relamp & Reballast w/ (3) F32T8, (1) 2/32 Elec. LP & (1) 1/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
819	8 - Fine Arts Building	144A INSTRUMENTAL REHI	1	UD43/T8L	4' Uplight/Downlight Fluorescent w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
820	8 - Fine Arts Building	144A INSTRUMENTAL REHI	9	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	9	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
821	8 - Fine Arts Building	144A INSTRUMENTAL REHI	5	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	N/R	No Retrofit Proposed
822	8 - Fine Arts Building	144A INSTRUMENTAL REHI	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
823	8 - Fine Arts Building	144C VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
824	8 - Fine Arts Building	142 MUSIC LIBRARY	8	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
825	8 - Fine Arts Building	142 MUSIC LIBRARY	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
826	8 - Fine Arts Building	144F INSTRUMENT LOCKEI	10	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
827	8 - Fine Arts Building	144E INSTRUMENT STORA	8	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
828	8 - Fine Arts Building	144E INSTRUMENT STORA	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
829	8 - Fine Arts Building	160K VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
830	8 - Fine Arts Building	160K VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
831	8 - Fine Arts Building	160J CORRIDOR	7	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
832	8 - Fine Arts Building	160J CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
833	8 - Fine Arts Building	160M VESTIBULE	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
834	8 - Fine Arts Building	160M VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
835	8 - Fine Arts Building	160H RESTROOM	3	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	3	N/R	No Retrofit Proposed
836	8 - Fine Arts Building	160G STORAGE	8	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
837	8 - Fine Arts Building	160A RECITAL HALL	5	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	5	N/R	No Retrofit Proposed
838	8 - Fine Arts Building	160C VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
839	8 - Fine Arts Building	160D CONTROL ROOM	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
840	8 - Fine Arts Building	160E VESTIBULE	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
841	8 - Fine Arts Building	160F DIMMER ROOM	1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
842	8 - Fine Arts Building	158 BOX OFFICE	2	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
843	8 - Fine Arts Building	159 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
844	8 - Fine Arts Building	190 STAIR	11	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	11	f2x26hdlr-7.5/d	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
845	8 - Fine Arts Building	190 STAIR	5	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	5	f2x26hdlr-7.5/d	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
846	8 - Fine Arts Building	157 LOBBY	8	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	8	f2x26hdlr-7.5/d	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
847	8 - Fine Arts Building	156A MAIN GALLERY	38	I1X50MR16TR	Incandescent Track Light Fixture w/ (1) 50w MR-16 Lamp	38	N/R	No Retrofit Proposed
848	8 - Fine Arts Building	156A MAIN GALLERY	4	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	4	N/R	No Retrofit Proposed
849	8 - Fine Arts Building	156B WORK ROOM	3	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
850	8 - Fine Arts Building	156C STORAGE	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
851	8 - Fine Arts Building	147A VESTIBULE	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
852	8 - Fine Arts Building	147A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
853	8 - Fine Arts Building	155 COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
854	8 - Fine Arts Building	154 ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
855	8 - Fine Arts Building	153 CLASS	8	UD844DIM/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast, Dimmer Controll	8	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
856	8 - Fine Arts Building	153 CLASS	4	ud42dimds/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dimmer Controlle	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
857	8 - Fine Arts Building	154 CLASS	8	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	8	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
858	8 - Fine Arts Building	154 CLASS	4	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	4	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
859	8 - Fine Arts Building	148 KEYBOARD LAB	3	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast

860	8 - Fine Arts Building	148 KEYBOARD LAB	3	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
861	8 - Fine Arts Building	149 MEN	5	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
862	8 - Fine Arts Building	149 MEN	4	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	4	N/R	No Retrofit Proposed
863	8 - Fine Arts Building	150 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
864	8 - Fine Arts Building	151 WOMEN	9	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
865	8 - Fine Arts Building	151 WOMEN	6	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	6	N/R	No Retrofit Proposed
866	8 - Fine Arts Building	147 LOWER GALLERY	18	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	18	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
867	8 - Fine Arts Building	147 LOWER GALLERY	4	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	4	N/R	No Retrofit Proposed
868	8 - Fine Arts Building	127 CORRIDOR	4	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
869	8 - Fine Arts Building	145 CLASS	8	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	8	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
870	8 - Fine Arts Building	145 CLASS	4	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	4	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
871	8 - Fine Arts Building	143 CLASS	8	UD844DS/T8L	8' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	8	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
872	8 - Fine Arts Building	143 CLASS	4	UD42DS/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast, Dual Switched	4	LB42LDS	Relamp & Reballast w/ (2) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
873	8 - Fine Arts Building	116A CORRIDOR	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
874	8 - Fine Arts Building	116A CORRIDOR	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
875	8 - Fine Arts Building	116B PRACTICE ROOM	2	W844/T8L	8' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
876	8 - Fine Arts Building	116C PRACTICE ROOM	2	W844/T8L	8' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
877	8 - Fine Arts Building	116D PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
878	8 - Fine Arts Building	116E PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
879	8 - Fine Arts Building	116F PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
880	8 - Fine Arts Building	116G PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
881	8 - Fine Arts Building	116H PRACTICE ROOM	2	W844/T8L	8' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
882	8 - Fine Arts Building	116I PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
883	8 - Fine Arts Building	116J PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
884	8 - Fine Arts Building	116K PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
885	8 - Fine Arts Building	116L PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
886	8 - Fine Arts Building	116M PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
887	8 - Fine Arts Building	116N PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
888	8 - Fine Arts Building	116O PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
889	8 - Fine Arts Building	116P PRACTICE ROOM	2	W844/T8L	8' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
890	8 - Fine Arts Building	116Q PRACTICE ROOM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
891	8 - Fine Arts Building	116R CORRIDOR	3	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
892	8 - Fine Arts Building	116R CORRIDOR	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
893	8 - Fine Arts Building	140A JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
894	8 - Fine Arts Building	140 WOMEN	7	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
895	8 - Fine Arts Building	140 WOMEN	5	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	N/R	No Retrofit Proposed
896	8 - Fine Arts Building	139 MEN	7	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
897	8 - Fine Arts Building	139 MEN	5	CF2X26	Compact Fluorescent Fixture w/ (2) 26w Compact Fluorescent Lamp & Magnetic Ballast	5	N/R	No Retrofit Proposed
898	8 - Fine Arts Building	115 OFFICE	4	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
899	8 - Fine Arts Building	115 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
900	8 - Fine Arts Building	117 OFFICE	4	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
901	8 - Fine Arts Building	117 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
902	8 - Fine Arts Building	118 CORRIDOR	19	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	19	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
903	8 - Fine Arts Building	118 CORRIDOR	4	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	4	N/R	No Retrofit Proposed
904	8 - Fine Arts Building	119 OFFICE	3	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
905	8 - Fine Arts Building	120 OFFICE	6	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
906	8 - Fine Arts Building	121 OFFICE	4	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
907	8 - Fine Arts Building	122 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
908	8 - Fine Arts Building	122 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
909	8 - Fine Arts Building	123 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
910	8 - Fine Arts Building	123 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
911	8 - Fine Arts Building	124 OFFICE	1	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
912	8 - Fine Arts Building	125 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
913	8 - Fine Arts Building	125 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
914	8 - Fine Arts Building	126 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
915	8 - Fine Arts Building	126 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
916	8 - Fine Arts Building	194 STAIRS	1	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
917	8 - Fine Arts Building	194 STAIRS	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
918	8 - Fine Arts Building	128 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
919	8 - Fine Arts Building	128 OFFICE	2	A44DS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
920	8 - Fine Arts Building	129 OFFICE	4	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
921	8 - Fine Arts Building	130 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
922	8 - Fine Arts Building	131 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
923	8 - Fine Arts Building	132 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
924	8 - Fine Arts Building	133 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
925	8 - Fine Arts Building	134 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
926	8 - Fine Arts Building	135 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
927	8 - Fine Arts Building	136 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

928	8 - Fine Arts Building	137 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
929	8 - Fine Arts Building	138 OFFICE	2	A44PBDS/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser, Dual S	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
930	8 - Fine Arts Building	195A VESTIBULE	2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
931	8 - Fine Arts Building	195A VESTIBULE	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
932	8 - Fine Arts Building	195 STAIR	2	UD42/T8L	4' Uplight/Downlight Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
933	8 - Fine Arts Building	195 STAIR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
934	8 - Fine Arts Building	3 MAIL ROOM	15	H44/T8L	4' Industrial Hood w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	15	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
935	8 - Fine Arts Building	2 ELEVATOR MACHINE RO	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
936	8 - Fine Arts Building	1 COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
937	8 - Fine Arts Building	23 SCENE SHOP	6	A41/T8L	2'x4' Recessed Troffer w/ (1) F32T8 Lamp & (1) Electronic Ballast	6	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
938	8 - Fine Arts Building	23 SCENE SHOP	6	C42X/T8L	1'x4' Surface Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
939	8 - Fine Arts Building	22A ELECTRICAL	2	H882/ES	8' Industrial Hood w/ (2) F96T12/65w Lamps & (1) Standard Magnetic Ballast	2	H844	New 8' Industrial Fixture w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power High Efficiency Ballast
940	8 - Fine Arts Building	21 VESTIBULE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
941	8 - Fine Arts Building	21 VESTIBULE	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
942	8 - Fine Arts Building	20 CORRIDOR	3	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
943	8 - Fine Arts Building	20 CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
944	8 - Fine Arts Building	22 ELECTRICAL	7	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
945	8 - Fine Arts Building	22 ELECTRICAL	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
946	8 - Fine Arts Building	19 CORRIDOR	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
947	8 - Fine Arts Building	19 CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
948	8 - Fine Arts Building	24A DUCT SPACE	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
949	8 - Fine Arts Building	24 CORRIDOR	16	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	16	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
950	8 - Fine Arts Building	24 CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
951	8 - Fine Arts Building	15 MECHANICAL	9	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
952	8 - Fine Arts Building	15A ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
953	8 - Fine Arts Building	16 CORRIDOR	5	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
954	8 - Fine Arts Building	5 STORAGE	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
955	8 - Fine Arts Building	6 OFFICE	4	A43PB/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (2) Electronic Ballast, Parabolic Diffuser	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
956	8 - Fine Arts Building	6 OFFICE	8	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
957	8 - Fine Arts Building	14 SCENE STORAGE	12	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
958	8 - Fine Arts Building	7 STORAGE	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
959	8 - Fine Arts Building	9 ELEVATOR MACHINE RO	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
960	8 - Fine Arts Building	8 FIRE PANEL ROOM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
961	8 - Fine Arts Building	13 CORRIDOR	8	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
962	8 - Fine Arts Building	13 CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
963	8 - Fine Arts Building	10 STORAGE	12	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
964	8 - Fine Arts Building	11 STORAGE	8	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
965	8 - Fine Arts Building	12 STORAGE	8	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
966	8 - Fine Arts Building	25 FIRE PUMP ROOM	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
967	8 - Fine Arts Building	16A CORRIDOR	3	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
968	8 - Fine Arts Building	16A CORRIDOR	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
969	8 - Fine Arts Building	26 GENERATOR	3	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
970	8 - Fine Arts Building	18 MECHANICAL	38	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	38	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
971	8 - Fine Arts Building	18 MECHANICAL	2	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
972	9 - Student Union	214 MEETING ROOM	28	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	28	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
973	9 - Student Union	215 MEETING ROOM	13	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	13	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
974	9 - Student Union	216 MEETING ROOM	18	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	18	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
975	9 - Student Union	217 MEETING ROOM	12	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	12	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
976	9 - Student Union	218 MEETING ROOM	12	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	12	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
977	9 - Student Union	219 MEETING ROOM	11	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	11	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
978	9 - Student Union	299 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
979	9 - Student Union	299 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
980	9 - Student Union	220 MECHANICAL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
981	9 - Student Union	299A CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
982	9 - Student Union	292 CATWALK	9	C42/EE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
983	9 - Student Union	292 CATWALK	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
984	9 - Student Union	202 PROJ ROOM	2	C42/EE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
985	9 - Student Union	295 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
986	9 - Student Union	201 EQUIPMENT ROOM	4	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
987	9 - Student Union	203 MECHANICAL	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
988	9 - Student Union	203 MECHANICAL	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
989	9 - Student Union	203 MECHANICAL	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
990	9 - Student Union	222 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
991	9 - Student Union	208 WOMEN	4	V842/T8L	8' Vanity Luminaire w/ (2) FO32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
992	9 - Student Union	209 COMM	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
993	9 - Student Union	211 MEN	4	V842/T8L	8' Vanity Luminaire w/ (2) FO32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
994	9 - Student Union	204 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
995	9 - Student Union	206 OFFICE	9	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	9	N/R	No Retrofit Proposed

996	9 - Student Union	212 MECHANICAL	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
997	9 - Student Union	212 MECHANICAL	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
998	9 - Student Union	298 STAIR	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
999	9 - Student Union	298 STAIR	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1000	9 - Student Union	298 STAIR	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1001	9 - Student Union	207 OFFICE	23	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	23	N/R	No Retrofit Proposed
1002	9 - Student Union	205 OFFICE	6	B23PB/T8L	2'x2' Recessed Troffer w/ (3) FO17T8 Lamps & (1) Electronic Ballast, Parabolic Diffuser	6	N/R	No Retrofit Proposed
1003	9 - Student Union	217A CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1004	9 - Student Union	223A OPEN LOUNGE	14	MH250LB	HID Low Bay Fixture w/ (1) 250w Metal Halide Lamp & Ballast	14	N/R	No Retrofit Proposed
1005	9 - Student Union	223A OPEN LOUNGE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1006	9 - Student Union	115 ALUMNI HALL	24	I1X1000	Incandescent Fixture w/ (1) 1000w Incandescent Lamp	24	N/R	No Retrofit Proposed
1007	9 - Student Union	115 ALUMNI HALL	4	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1008	9 - Student Union	116 STORAGE	3	A43X/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (2) Electronic Ballast	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1009	9 - Student Union	114 MECHANICAL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1010	9 - Student Union	114 MECHANICAL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1011	9 - Student Union	114 MECHANICAL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1012	9 - Student Union	199 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1013	9 - Student Union	199 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1014	9 - Student Union	101B SERVERY	8	C42/EE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1015	9 - Student Union	101AB CORRIDOR	3	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1016	9 - Student Union	101AB CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1017	9 - Student Union	101AB CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1018	9 - Student Union	197 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1019	9 - Student Union	197 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1020	9 - Student Union	197 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1021	9 - Student Union	101 CORRIDOR	1	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1022	9 - Student Union	101 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1023	9 - Student Union	101 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1024	9 - Student Union	106 STORAGE	3	W44/EE	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1025	9 - Student Union	103D CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1026	9 - Student Union	103 GOLDEN EAGLES	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1027	9 - Student Union	109 ENTRY	1	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	1	N/R	No Retrofit Proposed
1028	9 - Student Union	105 INFORMATION CENTEF	4	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1029	9 - Student Union	107 CORRIDOR	8	A42DD/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1030	9 - Student Union	108 WOMEN	4	V842/T8L	8' Vanity Luminaire w/ (2) FO32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1031	9 - Student Union	111 MEN	4	V842/T8L	8' Vanity Luminaire w/ (2) FO32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1032	9 - Student Union	112 STORAGE	4	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1033	9 - Student Union	112A COMM	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1034	9 - Student Union	112B ELECTRICAL	1	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1035	9 - Student Union	198 STAIR	2	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1036	9 - Student Union	119 CORRIDOR	20	UD43/T8L	4' Uplight/Downlight Fluorescent w/ (3) F32T8 Lamps & (1) Electronic Ballast	20	LB43L	Relamp & Reballast w/ (3) F28T8 Lamps & (1) 3/32 Elec. Low-Power High Efficiency Ballast
1037	9 - Student Union	119 CORRIDOR	5	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	5	N/R	No Retrofit Proposed
1038	9 - Student Union	119A VESTIBULE	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1039	9 - Student Union	124 STUDY ROOM	10	BU33PB/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Lens	10	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
1040	9 - Student Union	124 STUDY ROOM	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1041	9 - Student Union	119B VESTIBULE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1042	9 - Student Union	24 DINING	47	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	47	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1043	9 - Student Union	24 DINING	21	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	21	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1044	9 - Student Union	24 DINING	42	CF3X26WS	Compact Fluorescent "Wall Sconce" Fixture w/ (3) 26w Compact Fluorescent Lamps & Magnetic	42	N/R	No Retrofit Proposed
1045	9 - Student Union	24 DINING	4	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1046	9 - Student Union	18 DINING	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1047	9 - Student Union	99 STAIR	1	C42/EE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1048	9 - Student Union	99 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1049	9 - Student Union	99 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1050	9 - Student Union	19 MECHANICAL	3	H844/EE	8' Industrial Hood w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1051	9 - Student Union	19 MECHANICAL	4	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1052	9 - Student Union	23 SERVING	18	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	18	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1053	9 - Student Union	23 SERVING	57	I1X150PAR38	Incandescent Fixture w/ (1) 150w Incandescent PAR38 Lamp	57	CF23PAR38SI	Relamp w/ (1) 23 watt Compact Fluorescent Lamp Screw-In, 2 Piece, PAR38 Reflector
1054	9 - Student Union	23 HOOD	4	C22/SS	1'x2' Recessed Troffer w/ (2) F20T12 Lamps & (1) Standard Ballast	4	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
1055	9 - Student Union	21 KITCHEN	45	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	45	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1056	9 - Student Union	21 KITCHEN	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
1057	9 - Student Union	20 DISHWASH	16	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	16	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1058	9 - Student Union	20 DISHWASH	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1059	9 - Student Union	21 HOOD	6	C22/SS	1'x2' Recessed Troffer w/ (2) F20T12 Lamps & (1) Standard Ballast	6	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
1060	9 - Student Union	97 STAIR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1061	9 - Student Union	1 KITCHEN STORAGE	13	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	13	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1062	9 - Student Union	24B RAMP	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1063	9 - Student Union	24B RAMP	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed

1065	9 - Student Union	7 ELECTRICAL	12	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1066	9 - Student Union	25 STORAGE	12	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1067	9 - Student Union	8 LOCKER ROOM	2	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	2	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
1068	9 - Student Union	9A OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
1069	9 - Student Union	9B OFFICE	4	BU32PB/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 3"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser	4	RWB23	Relamp & Reballast w/ (3) F17T8 Lamps & (1) 3/17 Elec. Normal-Power High Efficiency Ballast, 2'x2' White Reflector Kit
1070	9 - Student Union	11 WOMEN	4	V842/T8L	8' Vanity Luminaire w/ (2) FO32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1071	9 - Student Union	12 COMM	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1072	9 - Student Union	14 MEN	4	V842/T8L	8' Vanity Luminaire w/ (2) FO32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1073	9 - Student Union	15 MECHANICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1074	9 - Student Union	98 STAIR	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1075	9 - Student Union	98 STAIR	1	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1076	9 - Student Union	98 STAIR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1077	10 - Classroom Building	4115 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1078	10 - Classroom Building	4115 WOMEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1079	10 - Classroom Building	4115 WOMEN	3	W22/T8L	2' Wrap Fluorescent w/ (2) FO17T8 Lamps & (1) Electronic Ballasts	3	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
1080	10 - Classroom Building	4113 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1081	10 - Classroom Building	4048 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1082	10 - Classroom Building	4047 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1083	10 - Classroom Building	4046 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1084	10 - Classroom Building	4045 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1085	10 - Classroom Building	4043 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1086	10 - Classroom Building	4042 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1087	10 - Classroom Building	4041 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1088	10 - Classroom Building	4040 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1089	10 - Classroom Building	4039 OFFICE	4	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1090	10 - Classroom Building	4037 CORRIDOR	5	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	5	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1091	10 - Classroom Building	4037 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1092	10 - Classroom Building	4037 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1093	10 - Classroom Building	4037 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1094	10 - Classroom Building	4044 OPEN OFFICE	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1095	10 - Classroom Building	4044 OPEN OFFICE	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1096	10 - Classroom Building	4044B FILES	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1097	10 - Classroom Building	4044A OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1098	10 - Classroom Building	4036 CONFERENCE ROOM	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1099	10 - Classroom Building	4036 CONFERENCE ROOM	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1100	10 - Classroom Building	4030 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1101	10 - Classroom Building	4030 OFFICE	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1102	10 - Classroom Building	4035 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1103	10 - Classroom Building	4034 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1104	10 - Classroom Building	4033 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1105	10 - Classroom Building	4032 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1106	10 - Classroom Building	4026 FILE ROOM	1	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	1	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1107	10 - Classroom Building	4026 FILE ROOM	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1108	10 - Classroom Building	4027 CONFERENCE ROOM	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1109	10 - Classroom Building	4028 FILE ROOM	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1110	10 - Classroom Building	4023 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1111	10 - Classroom Building	4023 OFFICE	9	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	9	N/R	No Retrofit Proposed
1112	10 - Classroom Building	4023 OFFICE	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1113	10 - Classroom Building	4023 OFFICE	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1114	10 - Classroom Building	4024 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1115	10 - Classroom Building	4025 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1116	10 - Classroom Building	4019 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1117	10 - Classroom Building	4018 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1118	10 - Classroom Building	4017 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1119	10 - Classroom Building	4016 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1120	10 - Classroom Building	4013 CORRIDOR	8	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1121	10 - Classroom Building	4013 CORRIDOR	8	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	8	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1122	10 - Classroom Building	4029 OPEN OFFICE	20	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	20	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1123	10 - Classroom Building	4029 OPEN OFFICE	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1124	10 - Classroom Building	4029G CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1125	10 - Classroom Building	4029A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1126	10 - Classroom Building	4029B OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1127	10 - Classroom Building	4020 SPEC. ED. CLASSROC	16	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	16	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1128	10 - Classroom Building	4020 SPEC. ED. CLASSROC	6	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	6	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
1129	10 - Classroom Building	4020 SPEC. ED. CLASSROC	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
1130	10 - Classroom Building	4020A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1131	10 - Classroom Building	420B OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1132	10 - Classroom Building	420C OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1133	10 - Classroom Building	420D CONFERENCE ROOM	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1134	10 - Classroom Building	420E OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1135	10 - Classroom Building	4001 CLASS	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1136	10 - Classroom Building	4001 CLASS	3	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	3	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
1137	10 - Classroom Building	4006 CLASS	12	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1138	10 - Classroom Building	4010 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1139	10 - Classroom Building	4011 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1140	10 - Classroom Building	4009 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1141	10 - Classroom Building	4008 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1142	10 - Classroom Building	4007 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1143	10 - Classroom Building	4005 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1144	10 - Classroom Building	4004 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1145	10 - Classroom Building	4003 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1146	10 - Classroom Building	4002 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1147	10 - Classroom Building	4000 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1148	10 - Classroom Building	4000 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1149	10 - Classroom Building	4000 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1150	10 - Classroom Building	4000 CORRIDOR	2	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1151	10 - Classroom Building	4000 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1152	10 - Classroom Building	4200A STAIR	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1153	10 - Classroom Building	4200 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1154	10 - Classroom Building	4200 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1155	10 - Classroom Building	4070 MECHANICAL	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1156	10 - Classroom Building	4112 MEN	5	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1157	10 - Classroom Building	4112 MEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1158	10 - Classroom Building	4110A CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1159	10 - Classroom Building	4095 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1160	10 - Classroom Building	4094 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1161	10 - Classroom Building	4093 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1162	10 - Classroom Building	4092 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1163	10 - Classroom Building	4089 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1164	10 - Classroom Building	4088 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1165	10 - Classroom Building	4087 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1166	10 - Classroom Building	4086 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1167	10 - Classroom Building	4085 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1168	10 - Classroom Building	4083 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1169	10 - Classroom Building	4083 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1170	10 - Classroom Building	4083 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1171	10 - Classroom Building	4083 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1172	10 - Classroom Building	4096 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1173	10 - Classroom Building	4097 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1174	10 - Classroom Building	4098 OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1175	10 - Classroom Building	4099 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1176	10 - Classroom Building	4100 OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1177	10 - Classroom Building	4101 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1178	10 - Classroom Building	4102 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1179	10 - Classroom Building	4103 OFFICE	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1180	10 - Classroom Building	4104 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1181	10 - Classroom Building	4105 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1182	10 - Classroom Building	4106 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1183	10 - Classroom Building	4107 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1184	10 - Classroom Building	4108 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1185	10 - Classroom Building	4109 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1186	10 - Classroom Building	4110 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1187	10 - Classroom Building	4091 STAFF LOUNGE	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1188	10 - Classroom Building	4090 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1189	10 - Classroom Building	4077 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1190	10 - Classroom Building	4082 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1191	10 - Classroom Building	4081 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1192	10 - Classroom Building	4080 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1193	10 - Classroom Building	4079 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1194	10 - Classroom Building	4073 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1195	10 - Classroom Building	4074 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1196	10 - Classroom Building	4075 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1197	10 - Classroom Building	4076 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1198	10 - Classroom Building	4072 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1199	10 - Classroom Building	4071 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1200	10 - Classroom Building	4070 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1201	10 - Classroom Building	4069 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1202	10 - Classroom Building	4062 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1203	10 - Classroom Building	4062A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1204	10 - Classroom Building	4063 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1205	10 - Classroom Building	4064 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1206	10 - Classroom Building	4081 CORRIDOR	6	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1207	10 - Classroom Building	4081 CORRIDOR	9	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	9	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1208	10 - Classroom Building	4067A OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1209	10 - Classroom Building	4067B OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1210	10 - Classroom Building	4067J CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1211	10 - Classroom Building	4067H OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1212	10 - Classroom Building	4067G OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1213	10 - Classroom Building	4067F OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1214	10 - Classroom Building	4067E OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1215	10 - Classroom Building	4066 TRAINING ROOM	4	A44DIM/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dimmer Controlled	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
1216	10 - Classroom Building	4066 TRAINING ROOM	1	a44dim/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dimmer Controlled	1	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
1217	10 - Classroom Building	4066 TRAINING ROOM	7	A42PCDIM/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast, Paracube Lens, Dimmer Co	7	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
1218	10 - Classroom Building	4067C OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1219	10 - Classroom Building	4067 DATA ENTRY	12	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1220	10 - Classroom Building	4067K CORRIDOR	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1221	10 - Classroom Building	4067K CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1222	10 - Classroom Building	4060 OPEN OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1223	10 - Classroom Building	4060 OPEN OFFICE	2	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1224	10 - Classroom Building	4058 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1225	10 - Classroom Building	4059 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1226	10 - Classroom Building	4057 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1227	10 - Classroom Building	4056 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1228	10 - Classroom Building	4055 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1229	10 - Classroom Building	4054 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1230	10 - Classroom Building	4053 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1231	10 - Classroom Building	4052 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1232	10 - Classroom Building	4051 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1233	10 - Classroom Building	4049 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1234	10 - Classroom Building	4049 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1235	10 - Classroom Building	4049 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1236	10 - Classroom Building	4049 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1237	10 - Classroom Building	4202A STAIR	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1238	10 - Classroom Building	4202 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1239	10 - Classroom Building	4202 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1240	10 - Classroom Building	3115 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1241	10 - Classroom Building	3115 WOMEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1242	10 - Classroom Building	3115 WOMEN	3	W22/T8L	2' Wrap Fluorescent w/ (2) FO17T8 Lamps & (1) Electronic Ballasts	3	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
1243	10 - Classroom Building	3113 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1244	10 - Classroom Building	3050 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1245	10 - Classroom Building	3049 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1246	10 - Classroom Building	3048 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1247	10 - Classroom Building	3047 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1248	10 - Classroom Building	3043 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1249	10 - Classroom Building	3042 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1250	10 - Classroom Building	3041 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1251	10 - Classroom Building	3040 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1252	10 - Classroom Building	3039 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1253	10 - Classroom Building	3037 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1254	10 - Classroom Building	3037 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1255	10 - Classroom Building	3037 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1256	10 - Classroom Building	3037 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1257	10 - Classroom Building	3036 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1258	10 - Classroom Building	3035 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1259	10 - Classroom Building	3034 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1260	10 - Classroom Building	3033 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1261	10 - Classroom Building	3026 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1262	10 - Classroom Building	3028 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1263	10 - Classroom Building	3029 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1264	10 - Classroom Building	3030 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1265	10 - Classroom Building	3025 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1266	10 - Classroom Building	3024 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1267	10 - Classroom Building	3023 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1268	10 - Classroom Building	3022 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1269	10 - Classroom Building	3019 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1270	10 - Classroom Building	3018 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1271	10 - Classroom Building	3017 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1272	10 - Classroom Building	3016 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1273	10 - Classroom Building	3014 CORRIDOR	8	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1274	10 - Classroom Building	3014 CORRIDOR	11	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	11	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1275	10 - Classroom Building	3014 DISPLAY	4	S21/SS	2' Strip Fluorescent w/ (1) F20T12 Lamp (1) Standard Magnetic Ballast	4	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
1276	10 - Classroom Building	3012 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1277	10 - Classroom Building	3011 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1278	10 - Classroom Building	3010 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1279	10 - Classroom Building	3009 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1280	10 - Classroom Building	3008 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1281	10 - Classroom Building	3007 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1282	10 - Classroom Building	3006 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1283	10 - Classroom Building	3002 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1284	10 - Classroom Building	3001 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1285	10 - Classroom Building	3000 CORRIDOR	4	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1286	10 - Classroom Building	3000 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1287	10 - Classroom Building	3000 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1288	10 - Classroom Building	3000 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1289	10 - Classroom Building	3000 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1290	10 - Classroom Building	3200A STAIR	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1291	10 - Classroom Building	3200 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1292	10 - Classroom Building	3200 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1293	10 - Classroom Building	3112 MEN	5	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1294	10 - Classroom Building	3112 MEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1295	10 - Classroom Building	3110 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1296	10 - Classroom Building	3100 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1297	10 - Classroom Building	3099 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1298	10 - Classroom Building	3098 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1299	10 - Classroom Building	3097 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1300	10 - Classroom Building	3093 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1301	10 - Classroom Building	3092 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1302	10 - Classroom Building	3091 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1303	10 - Classroom Building	3090 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1304	10 - Classroom Building	3089 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1305	10 - Classroom Building	3087 CORRIDOR	4	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1306	10 - Classroom Building	3087 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1307	10 - Classroom Building	3087 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1308	10 - Classroom Building	3087 CORRIDOR	1	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1309	10 - Classroom Building	3087 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1310	10 - Classroom Building	3086 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1311	10 - Classroom Building	3085 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1312	10 - Classroom Building	3084 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1313	10 - Classroom Building	3083 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1314	10 - Classroom Building	3077 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1315	10 - Classroom Building	3078 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1316	10 - Classroom Building	3079 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1317	10 - Classroom Building	3080 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1318	10 - Classroom Building	3076 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1319	10 - Classroom Building	3075 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1320	10 - Classroom Building	3074 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1321	10 - Classroom Building	3073 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1322	10 - Classroom Building	3070 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1323	10 - Classroom Building	3069 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1324	10 - Classroom Building	3068 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1325	10 - Classroom Building	3067 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1326	10 - Classroom Building	3065 CORRIDOR	8	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1327	10 - Classroom Building	3065 CORRIDOR	11	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	11	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1328	10 - Classroom Building	3065 DISPLAY	4	S21/SS	2' Strip Fluorescent w/ (1) F20T12 Lamp (1) Standard Magnetic Ballast	4	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
1329	10 - Classroom Building	3062 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1330	10 - Classroom Building	3063 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1331	10 - Classroom Building	3061 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1332	10 - Classroom Building	3060 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1333	10 - Classroom Building	3059 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1334	10 - Classroom Building	3058 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1335	10 - Classroom Building	3057 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1336	10 - Classroom Building	3053 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1337	10 - Classroom Building	3052 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1338	10 - Classroom Building	3051 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1339	10 - Classroom Building	3051 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1340	10 - Classroom Building	3051 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1341	10 - Classroom Building	3051 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1342	10 - Classroom Building	3051 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1343	10 - Classroom Building	3202A STAIR	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1344	10 - Classroom Building	3202 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1345	10 - Classroom Building	3202 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1346	10 - Classroom Building	3046 CLASS	6	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	6	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1347	10 - Classroom Building	3046 CLASS	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1348	10 - Classroom Building	3046A OFFICE	2	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	2	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1349	10 - Classroom Building	3045 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1350	10 - Classroom Building	3045 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1351	10 - Classroom Building	3044 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1352	10 - Classroom Building	3044 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1353	10 - Classroom Building	3031 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1354	10 - Classroom Building	3031 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1355	10 - Classroom Building	3020 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1356	10 - Classroom Building	3020 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1357	10 - Classroom Building	3005 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1358	10 - Classroom Building	3005 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1359	10 - Classroom Building	3004 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1360	10 - Classroom Building	3004 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1361	10 - Classroom Building	3003 CLASS	8	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	8	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1362	10 - Classroom Building	3003 CLASS	7	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	7	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1363	10 - Classroom Building	3096 CLASS	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1364	10 - Classroom Building	3095 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1365	10 - Classroom Building	3095 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1366	10 - Classroom Building	3094 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1367	10 - Classroom Building	3094 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1368	10 - Classroom Building	3081 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1369	10 - Classroom Building	3081 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1370	10 - Classroom Building	3071 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1371	10 - Classroom Building	3071 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1372	10 - Classroom Building	3056 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1373	10 - Classroom Building	3056 CLASS	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1374	10 - Classroom Building	3055 MECH ROOM	6	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1375	10 - Classroom Building	3055 MECH ROOM	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1376	10 - Classroom Building	3054 SERVER ROOM	8	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1377	10 - Classroom Building	3054 SERVER ROOM	4	d46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1378	10 - Classroom Building	3108 NETWORK SEVICES	16	A44PB/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Parabolic Diffuser	16	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1379	10 - Classroom Building	3109 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1380	10 - Classroom Building	3109 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1381	10 - Classroom Building	3103 OFFICE	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1382	10 - Classroom Building	3103 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1383	10 - Classroom Building	3102 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1384	10 - Classroom Building	3102 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1385	10 - Classroom Building	3105 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1386	10 - Classroom Building	3105 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1387	10 - Classroom Building	3106 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1388	10 - Classroom Building	3106 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1389	10 - Classroom Building	3107 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1390	10 - Classroom Building	3107 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1391	10 - Classroom Building	3107 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1392	10 - Classroom Building	3104 BALCONY	8	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1393	10 - Classroom Building	3104 BALCONY	18	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	18	N/R	No Retrofit Proposed
1394	10 - Classroom Building	3101 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1395	10 - Classroom Building	3101 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1396	10 - Classroom Building	3101 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1397	10 - Classroom Building	2115 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1398	10 - Classroom Building	2115 WOMEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1399	10 - Classroom Building	2115 WOMEN	3	W22/T8L	2' Wrap Fluorescent w/ (2) FO17T8 Lamps & (1) Electronic Ballasts	3	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
1400	10 - Classroom Building	2113 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1401	10 - Classroom Building	2050 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1402	10 - Classroom Building	2049 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1403	10 - Classroom Building	2048 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1404	10 - Classroom Building	2047 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1405	10 - Classroom Building	2043 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1406	10 - Classroom Building	2042 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1407	10 - Classroom Building	2041 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1408	10 - Classroom Building	2040 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1409	10 - Classroom Building	2039 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1410	10 - Classroom Building	2037 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1411	10 - Classroom Building	2037 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1412	10 - Classroom Building	2037 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1413	10 - Classroom Building	2037 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1414	10 - Classroom Building	2037 CORRIDOR	3	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
1415	10 - Classroom Building	2036 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1416	10 - Classroom Building	2035 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1417	10 - Classroom Building	2034 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1418	10 - Classroom Building	2033 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1419	10 - Classroom Building	2030 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1420	10 - Classroom Building	2029 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1421	10 - Classroom Building	2028 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1422	10 - Classroom Building	2027 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1423	10 - Classroom Building	2025 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1424	10 - Classroom Building	2024 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1425	10 - Classroom Building	2023 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1426	10 - Classroom Building	2022 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1427	10 - Classroom Building	2019 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1428	10 - Classroom Building	2018 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1429	10 - Classroom Building	2017 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1430	10 - Classroom Building	2016 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1431	10 - Classroom Building	2014 CORRIDOR	0	S634/SS	6' Strip Fluorescent w/ (4) F30T12 Lamps & (2) Standard Magnetic Ballasts	0	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1432	10 - Classroom Building	2014 CORRIDOR	10	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	10	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1433	10 - Classroom Building	2014 CORRIDOR	10	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	10	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1434	10 - Classroom Building	2014 CORRIDOR	8	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	8	N/R	No Retrofit Proposed
1435	10 - Classroom Building	2014 DISPLAY	4	S21/SS	2' Strip Fluorescent w/ (1) F20T12 Lamp (1) Standard Magnetic Ballast	4	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
1436	10 - Classroom Building	2011 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1437	10 - Classroom Building	2012 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1438	10 - Classroom Building	2010 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1439	10 - Classroom Building	2009 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1440	10 - Classroom Building	2008 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1441	10 - Classroom Building	2007 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1442	10 - Classroom Building	2006 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1443	10 - Classroom Building	2002 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1444	10 - Classroom Building	2001 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1445	10 - Classroom Building	2000 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1446	10 - Classroom Building	2000 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1447	10 - Classroom Building	2000 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1448	10 - Classroom Building	2000 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1449	10 - Classroom Building	2000 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1450	10 - Classroom Building	2200A STAIR	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1451	10 - Classroom Building	2200 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1452	10 - Classroom Building	2200 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1453	10 - Classroom Building	2112 MEN	5	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1454	10 - Classroom Building	2112 MEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1455	10 - Classroom Building	2110 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1456	10 - Classroom Building	2110 CORRIDOR	1	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1457	10 - Classroom Building	2100 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1458	10 - Classroom Building	2099 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1459	10 - Classroom Building	2098 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1460	10 - Classroom Building	2097 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1461	10 - Classroom Building	2093 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1462	10 - Classroom Building	2092 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1463	10 - Classroom Building	2091 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1464	10 - Classroom Building	2090 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1465	10 - Classroom Building	2089 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1466	10 - Classroom Building	2087 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1467	10 - Classroom Building	2087 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1468	10 - Classroom Building	2087 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1469	10 - Classroom Building	2087 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1470	10 - Classroom Building	2087 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1471	10 - Classroom Building	2086 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1472	10 - Classroom Building	2085 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1473	10 - Classroom Building	2084 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1474	10 - Classroom Building	2083 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1475	10 - Classroom Building	2080 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1476	10 - Classroom Building	2079 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1477	10 - Classroom Building	2078 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1478	10 - Classroom Building	2077 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1479	10 - Classroom Building	2076 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1480	10 - Classroom Building	2075 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1481	10 - Classroom Building	2074 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1482	10 - Classroom Building	2073 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1483	10 - Classroom Building	2070 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1484	10 - Classroom Building	2069 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1485	10 - Classroom Building	2068 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1486	10 - Classroom Building	2067 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1487	10 - Classroom Building	2065 CORRIDOR	9	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	9	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1488	10 - Classroom Building	2065 CORRIDOR	10	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	10	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1489	10 - Classroom Building	2065 CORRIDOR	4	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1490	10 - Classroom Building	2065 DISPLAY	4	S21/T8L	2' Strip Fluorescent w/ (1) FO20T8 Lamp & (1) Electronic Ballast	4	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
1491	10 - Classroom Building	2062 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1492	10 - Classroom Building	2063 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1493	10 - Classroom Building	2061 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1494	10 - Classroom Building	2060 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1495	10 - Classroom Building	2059 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1496	10 - Classroom Building	2058 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1497	10 - Classroom Building	2057 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1498	10 - Classroom Building	2053 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1499	10 - Classroom Building	2052 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1500	10 - Classroom Building	2051 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1501	10 - Classroom Building	2051 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1502	10 - Classroom Building	2051 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1503	10 - Classroom Building	2051 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1504	10 - Classroom Building	2051 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1505	10 - Classroom Building	2202A STAIR	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1506	10 - Classroom Building	2202 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1507	10 - Classroom Building	2202 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1508	10 - Classroom Building	2046 OFFICE	2	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	2	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1509	10 - Classroom Building	2046 OFFICE	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1510	10 - Classroom Building	2046A WRITING LAB	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1511	10 - Classroom Building	2046A WRITING LAB	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1512	10 - Classroom Building	2046B OFFICE	1	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	1	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1513	10 - Classroom Building	2045	2	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1514	10 - Classroom Building	2045	6	I1X75R40	Incandescent Fixture w/ (1) 75w Incandescent Lamp	6	CF20R40SI	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ R40 Reflector
1515	10 - Classroom Building	2044 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1516	10 - Classroom Building	2044 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1517	10 - Classroom Building	2031 CLASS	9	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	9	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1518	10 - Classroom Building	2031 CLASS	4	D46PC/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts, Paracube Lens	4	LB44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power High Efficiency Ballast
1519	10 - Classroom Building	2020 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1520	10 - Classroom Building	2020 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1521	10 - Classroom Building	2005 CLASS	3	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	3	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1522	10 - Classroom Building	2005 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1523	10 - Classroom Building	2004 STORAGE	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1524	10 - Classroom Building	2004 STORAGE	5	I1X75R40	Incandescent Fixture w/ (1) 75w Incandescent Lamp	5	CF20R40SI	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ R40 Reflector
1525	10 - Classroom Building	2096 OFFICE	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1526	10 - Classroom Building	2095	2	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1527	10 - Classroom Building	2095	6	I1X75R40	Incandescent Fixture w/ (1) 75w Incandescent Lamp	6	CF20R40SI	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ R40 Reflector
1528	10 - Classroom Building	2094 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1529	10 - Classroom Building	2094 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1530	10 - Classroom Building	2081 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1531	10 - Classroom Building	2081 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1532	10 - Classroom Building	2071 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1533	10 - Classroom Building	2071 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1534	10 - Classroom Building	2056 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1535	10 - Classroom Building	2056 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1536	10 - Classroom Building	2055 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1537	10 - Classroom Building	2055 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1538	10 - Classroom Building	2054 CLASS	20	BU62PBDIM/T	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast, Parabolic Diffuser, Di	20	N/R	No Retrofit Proposed
1539	10 - Classroom Building	2054 CLASS	7	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	7	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1540	10 - Classroom Building	2054 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1541	10 - Classroom Building	2054 CLASS	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1542	10 - Classroom Building	2108 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1543	10 - Classroom Building	2108 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1544	10 - Classroom Building	2109 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1545	10 - Classroom Building	2109 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1546	10 - Classroom Building	2103 OFFICE	7	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	7	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1547	10 - Classroom Building	2103 OFFICE	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1548	10 - Classroom Building	2102 CONFERENCE ROOM	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1549	10 - Classroom Building	2102 CONFERENCE ROOM	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1550	10 - Classroom Building	2003 READING CENTER	8	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	8	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1551	10 - Classroom Building	2003 READING CENTER	7	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	7	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1552	10 - Classroom Building	2105 CLASS	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1553	10 - Classroom Building	2105 CLASS	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1554	10 - Classroom Building	2106 WRITING LAB	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1555	10 - Classroom Building	2106 WRITING LAB	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1556	10 - Classroom Building	2107 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1557	10 - Classroom Building	2107 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1558	10 - Classroom Building	2107 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1559	10 - Classroom Building	2104 COMPUTER AREA	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1560	10 - Classroom Building	2104 COMPUTER AREA	8	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1561	10 - Classroom Building	2104 COMPUTER AREA	18	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	18	N/R	No Retrofit Proposed
1562	10 - Classroom Building	2101 CORRIDOR	2	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1563	10 - Classroom Building	2101 CORRIDOR	3	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
1564	10 - Classroom Building	2101 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1565	10 - Classroom Building	1007 MEN	4	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1566	10 - Classroom Building	1007 MEN	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1567	10 - Classroom Building	1007 MEN	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1568	10 - Classroom Building	1005 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1569	10 - Classroom Building	1200 STAIR	4	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1570	10 - Classroom Building	1200 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1571	10 - Classroom Building	1200 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1572	10 - Classroom Building	1200 STAIR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1573	10 - Classroom Building	1011 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1574	10 - Classroom Building	1015 LOBBY	4	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1575	10 - Classroom Building	1014 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1576	10 - Classroom Building	1008 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1577	10 - Classroom Building	1010 WOMEN	6	V41/T8L	4' Vanity Luminaire w/ (1) F32T8 Lamp (1) Electronic Ballast,	6	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1578	10 - Classroom Building	1010 WOMEN	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1579	10 - Classroom Building	1010 WOMEN	1	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1580	10 - Classroom Building	1202 STAIR	4	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1581	10 - Classroom Building	1202 STAIR	1	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1582	10 - Classroom Building	1202 STAIR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1583	10 - Classroom Building	1202 STAIR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1584	10 - Classroom Building	1002 LECTURE HALL	4	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1585	10 - Classroom Building	1002 LECTURE HALL	46	I1X25	Incandescent Fixture w/ (1) 25w Incandescent Lamp	46	CF09SI	Relamp w/ (1) 9 watt Compact Fluorescent Screw-In
1586	10 - Classroom Building	1004 CONTROL ROOM	5	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1587	10 - Classroom Building	1004 CONTROL ROOM	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1588	10 - Classroom Building	1001 LECTURE HALL	4	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1589	10 - Classroom Building	1001 LECTURE HALL	46	I1X25	Incandescent Fixture w/ (1) 25w Incandescent Lamp	46	CF09SI	Relamp w/ (1) 9 watt Compact Fluorescent Screw-In
1590	10 - Classroom Building	1003 CONTROL ROOM	5	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1591	10 - Classroom Building	1003 CONTROL ROOM	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1592	10 - Classroom Building	52 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1593	10 - Classroom Building	52 WOMEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1594	10 - Classroom Building	52 WOMEN	3	W22/T8L	2' Wrap Fluorescent w/ (2) FO17T8 Lamps & (1) Electronic Ballasts	3	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
1595	10 - Classroom Building	25 CORRIDOR	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1596	10 - Classroom Building	25 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1597	10 - Classroom Building	25 CORRIDOR	11	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	11	N/R	No Retrofit Proposed
1598	10 - Classroom Building	25 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1599	10 - Classroom Building	2 COMPUTER LAB	54	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	54	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1600	10 - Classroom Building	2 COMPUTER LAB	24	UD844P/T8L	8' Uplight/Downlight Pendant Mounted Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballas	24	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1601	10 - Classroom Building	2 COMPUTER LAB	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1602	10 - Classroom Building	2A STORAGE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1603	10 - Classroom Building	2B STORAGE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1604	10 - Classroom Building	24C OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1605	10 - Classroom Building	24C OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1606	10 - Classroom Building	24B OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1607	10 - Classroom Building	24B OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1608	10 - Classroom Building	24A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1609	10 - Classroom Building	24A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1610	10 - Classroom Building	15 AUDIO STUDIO	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1611	10 - Classroom Building	15 AUDIO STUDIO	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1612	10 - Classroom Building	14 CONTROL ROOM	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1613	10 - Classroom Building	14 CONTROL ROOM	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1614	10 - Classroom Building	23 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1615	10 - Classroom Building	22 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1616	10 - Classroom Building	21 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1617	10 - Classroom Building	20 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1618	10 - Classroom Building	19 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1619	10 - Classroom Building	18 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1620	10 - Classroom Building	17 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1621	10 - Classroom Building	16 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1622	10 - Classroom Building	13 CORRIDOR	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1623	10 - Classroom Building	13 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1624	10 - Classroom Building	13 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1625	10 - Classroom Building	13 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1626	10 - Classroom Building	13 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1627	10 - Classroom Building	55A COMM	16	W44/T8L	4' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	16	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1628	10 - Classroom Building	55A COMM	2	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1629	10 - Classroom Building	55 TELEPHONE SWITCHBC	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1632	10 - Classroom Building	3 CORRIDOR	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1633	10 - Classroom Building	3 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1634	10 - Classroom Building	3 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1635	10 - Classroom Building	3 CORRIDOR	1	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	1	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1636	10 - Classroom Building	3 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1637	10 - Classroom Building	10 AV OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1638	10 - Classroom Building	9 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1639	10 - Classroom Building	8A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1640	10 - Classroom Building	8B OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1641	10 - Classroom Building	8C OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1642	10 - Classroom Building	7 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1643	10 - Classroom Building	6 OFFICE	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1644	10 - Classroom Building	4 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1645	10 - Classroom Building	4A OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1646	10 - Classroom Building	1 CORRIDOR	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1647	10 - Classroom Building	1 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1648	10 - Classroom Building	1 CORRIDOR	7	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	7	N/R	No Retrofit Proposed
1649	10 - Classroom Building	1 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
1650	10 - Classroom Building	46 MEN	5	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1651	10 - Classroom Building	46 MEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1652	10 - Classroom Building	45 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1653	10 - Classroom Building	43 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1654	10 - Classroom Building	42 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1655	10 - Classroom Building	41 OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1656	10 - Classroom Building	40 OFFICE	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1657	10 - Classroom Building	44A OFFICE	5	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1658	10 - Classroom Building	44B OFFICE	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1659	10 - Classroom Building	44C OFFICE	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1660	10 - Classroom Building	38 EMERGENCY GENERAT	6	H844/T8L	8' Industrial Hood w/ (4) FO32T8 Lamps & (1) Electronic Ballast	6	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1661	10 - Classroom Building	38 EMERGENCY GENERAT	4	H844/T8L	8' Industrial Hood w/ (4) FO32T8 Lamps & (1) Electronic Ballast	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1662	10 - Classroom Building	39 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1663	10 - Classroom Building	39 CORRIDOR	2	S634/T8L	6' Strip Fluorescent w/ (4) FO25T8 Lamps & (1) Electronic Ballast	2	LB34L	Relamp & Reballast w/ (4) F25T8 Lamps & (1) 4/25 Elec. Low-Power High Efficiency Ballast
1664	10 - Classroom Building	39 CORRIDOR	1	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1665	10 - Classroom Building	39 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1666	10 - Classroom Building	37 CORRIDOR	4	D46/T8L	4'x4' Recessed Troffer w/ (6) FO32T8/32w Lamps & (2) Electronic Ballasts	4	RWD44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast, (1) 4x4 White Reflector Kit
1667	10 - Classroom Building	37 CORRIDOR	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1668	10 - Classroom Building	57 ELECTRICAL	4	H844/T8L	8' Industrial Hood w/ (4) FO32T8 Lamps & (1) Electronic Ballast	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1669	10 - Classroom Building	57 ELECTRICAL	2	H844/T8L	8' Industrial Hood w/ (4) FO32T8 Lamps & (1) Electronic Ballast	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1670	10 - Classroom Building	36 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1671	10 - Classroom Building	35 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1672	10 - Classroom Building	34 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1673	10 - Classroom Building	33 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1674	10 - Classroom Building	32 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1675	10 - Classroom Building	31 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1676	10 - Classroom Building	30 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1677	10 - Classroom Building	29 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1678	10 - Classroom Building	28 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1679	10 - Classroom Building	28 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1680	10 - Classroom Building	27 VENDING	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1681	10 - Classroom Building	25 CORRIDOR	3	S844/T8L	8' Strip Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1682	10 - Classroom Building	25 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1683	10 - Classroom Building	25 CORRIDOR	3	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1684	10 - Classroom Building	25 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
1685	11 - Parking Facility	LEVEL 5 PARKING	24	mh400	HID Fixture w/ (1) 400w Metal Halide Lamp & Ballast	24	N/R	No Retrofit Proposed
1686	11 - Parking Facility	LEVEL 4 PARKING	49	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	49	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1687	11 - Parking Facility	LEVEL 4 PARKING	16	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	16	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1688	11 - Parking Facility	LEVEL 4 PARKING	28	MH100LB	HID Low Bay Fixture w/ (1) 100w Metal Halide Lamp & Ballast	28	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1689	11 - Parking Facility	LEVEL 4 PARKING	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1690	11 - Parking Facility	LEVEL 4 - 3 RAMP	18	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	18	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1691	11 - Parking Facility	LEVEL 3 PARKING	41	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	41	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1692	11 - Parking Facility	LEVEL 3 PARKING	16	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	16	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1693	11 - Parking Facility	LEVEL 3 PARKING	28	MH100LB	HID Low Bay Fixture w/ (1) 100w Metal Halide Lamp & Ballast	28	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1694	11 - Parking Facility	LEVEL 3 PARKING	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1695	11 - Parking Facility	LEVEL 3 - 2 RAMP	18	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	18	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1696	11 - Parking Facility	LEVEL 2 PARKING	46	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	46	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1697	11 - Parking Facility	LEVEL 2 PARKING	16	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	16	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1698	11 - Parking Facility	LEVEL 2 PARKING	28	MH100LB	HID Low Bay Fixture w/ (1) 100w Metal Halide Lamp & Ballast	28	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1699	11 - Parking Facility	LEVEL 2 PARKING	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1700	11 - Parking Facility	LEVEL 2 - 1 RAMP	18	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	18	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1701	11 - Parking Facility	LEVEL 1 PARKING	43	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	43	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1702	11 - Parking Facility	LEVEL 1 PARKING	18	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	18	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1703	11 - Parking Facility	LEVEL 1 PARKING	26	MH100LB	HID Low Bay Fixture w/ (1) 100w Metal Halide Lamp & Ballast	26	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1704	11 - Parking Facility	RAMP/DOWN	12	MH175LB	HID Low Bay Fixture w/ (1) 175w Metal Halide Lamp & Ballast	12	VP43	New 4' Vapor-Tight Wrap Fixture w/ (3) F32T8 Lamps & (1) 3/32 Elec. Normal-Power High Efficiency Ballast
1705	11 - Parking Facility	LEVEL 5	5	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	5	N/R	No Retrofit Proposed
1706	11 - Parking Facility	LEVEL 4	6	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
1707	11 - Parking Facility	LEVEL 3	6	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
1708	11 - Parking Facility	LEVEL 2	6	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
1709	11 - Parking Facility	LEVEL 1	12	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	12	N/R	No Retrofit Proposed
1710	11 - Parking Facility	122 INTERVIEW	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1711	11 - Parking Facility	122 INTERVIEW	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1712	11 - Parking Facility	CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1713	11 - Parking Facility	121 INTERVIEW	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1714	11 - Parking Facility	102 TRAINING ROOM	8	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	8	N/R	No Retrofit Proposed
1715	11 - Parking Facility	102 TRAINING ROOM	2	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1716	11 - Parking Facility	102 TRAINING ROOM	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1717	11 - Parking Facility	CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1718	11 - Parking Facility	114 FILES	6	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	6	N/R	No Retrofit Proposed
1719	11 - Parking Facility	114 FILES	1	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	1	N/R	No Retrofit Proposed
1720	11 - Parking Facility	113 OFFICE	3	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	3	N/R	No Retrofit Proposed
1721	11 - Parking Facility	104 DISPATCH	2	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
1722	11 - Parking Facility	107 RECEPTION	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1723	11 - Parking Facility	101 VESTIBULE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1724	11 - Parking Facility	110 OFFICE	3	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	3	N/R	No Retrofit Proposed
1725	11 - Parking Facility	108 OPEN OFFICE	9	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	9	N/R	No Retrofit Proposed
1726	11 - Parking Facility	108 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1727	11 - Parking Facility	125 OPEN OFFICE	5	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	5	N/R	No Retrofit Proposed
1728	11 - Parking Facility	125 OPEN OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1729	11 - Parking Facility	126 OPEN OFFICE	4	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	4	N/R	No Retrofit Proposed
1730	11 - Parking Facility	128 OFFICE	2	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
1731	11 - Parking Facility	129 STORAGE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1732	11 - Parking Facility	127 CONFERENCE ROOM	3	a22ud/T5L	2'x4' Direct/Indirect Troffer w/ (2) FO28T5 Lamps & (1) Electronic Ballast	3	N/R	No Retrofit Proposed
1733	11 - Parking Facility	135 LOBBY	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1734	11 - Parking Facility	109 ELEVATOR MACHINE R	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1735	11 - Parking Facility	106 MECHANICAL	5	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1736	11 - Parking Facility	107 ELECTRICAL	2	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1737	11 - Parking Facility	108 COMM	2	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1738	12 - Library	456 GENERAL STACKS	299	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	299	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1739	12 - Library	456 GENERAL STACKS	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1740	12 - Library	493 STAIR	4	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1741	12 - Library	456 GENERAL STACKS	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1742	12 - Library	456 GENERAL STACKS	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1743	12 - Library	456 GENERAL STACKS	4	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
1744	12 - Library	401 STUDY	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1745	12 - Library	402 STUDY	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1746	12 - Library	400 CORRIDOR	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit

1747	12 - Library	412 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1748	12 - Library	411 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1749	12 - Library	410 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1750	12 - Library	409 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1751	12 - Library	408 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1752	12 - Library	407 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1753	12 - Library	406 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1754	12 - Library	405 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1755	12 - Library	404 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1756	12 - Library	403 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1757	12 - Library	400A LOUNGE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1758	12 - Library	400A LOUNGE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1759	12 - Library	448 CORRIDOR	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1760	12 - Library	446 ELEVATOR	3	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1761	12 - Library	491 STAIR	3	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1762	12 - Library	491 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1763	12 - Library	449A LANGUAGE LAB	15	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	15	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1764	12 - Library	450 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1765	12 - Library	451 LANGUAGE LAB	30	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	30	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1766	12 - Library	452 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1767	12 - Library	453 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1768	12 - Library	454 TUTORING	20	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	20	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1769	12 - Library	460 ELEVATOR LOBBY	8	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1770	12 - Library	458 STUDY AREA	32	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	32	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1771	12 - Library	458 STUDY AREA	1	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	1	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1772	12 - Library	458 STUDY AREA	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1773	12 - Library	458 STUDY AREA	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1774	12 - Library	459 STUDY	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1775	12 - Library	460 STUDY	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1776	12 - Library	461 LOUNGE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1777	12 - Library	492 STAIR	4	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1778	12 - Library	401A VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1779	12 - Library	402A WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1780	12 - Library	402A WOMEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1781	12 - Library	404A VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1782	12 - Library	403A MEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1783	12 - Library	403A MEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1784	12 - Library	471 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1785	12 - Library	470 OFFICE	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1786	12 - Library	471A RECEPTION	5	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	5	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1787	12 - Library	471A RECEPTION	1	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	1	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1788	12 - Library	467 STUDY	23	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	23	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1789	12 - Library	467 STUDY	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1790	12 - Library	468 CLASS	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1791	12 - Library	469 CLASS	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1792	12 - Library	593 STAIR	4	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1793	12 - Library	500 MECHANICAL ROOM	3	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1794	12 - Library	500 MECHANICAL ROOM	11	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	11	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1795	12 - Library	500 MECHANICAL ROOM	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1796	12 - Library	501 GENERATOR	2	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1797	12 - Library	502 MECHANICAL ROOM	2	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1798	12 - Library	361 GENERAL STACKS	360	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	360	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1799	12 - Library	361 GENERAL STACKS	4	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1800	12 - Library	361 GENERAL STACKS	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1801	12 - Library	361 GENERAL STACKS	6	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
1802	12 - Library	392 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1803	12 - Library	392 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1804	12 - Library	301A VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1805	12 - Library	302A WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1806	12 - Library	302A WOMEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1807	12 - Library	304A VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1808	12 - Library	303A MEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1809	12 - Library	303A MEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1810	12 - Library	393 STAIR	3	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1811	12 - Library	393 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1812	12 - Library	301 STUDY	12	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	12	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1813	12 - Library	302 STUDY	12	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	12	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1814	12 - Library	303 STUDY	12	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	12	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit

1815	12 - Library	312 FACULTY STUDY	24	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	24	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1816	12 - Library	312 FACULTY STUDY	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1817	12 - Library	310 FACULTY INSTRUCTIO	16	UD44/T8L	4' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (1) Electronic Ballast	16	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1818	12 - Library	310 FACULTY INSTRUCTIO	4	UD44DS/T8L	4' Uplight/Downlight Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Dual Switched	4	LB44LDS	Relamp & Reballast w/ (4) F32T8 Lamps & (2) 2/32 Elec. Low-Power High Efficiency Ballasts, Dual Switched
1819	12 - Library	310 FACULTY INSTRUCTIO	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1820	12 - Library	310 FACULTY INSTRUCTIO	4	I1X65R30DIM	Incandescent Fixture w/ (1) 65w Incandescent ER or BR Lamp, Dimmer Controlled	4	CF15R30SIDIM	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector, Dimmable Ballast
1821	12 - Library	348 CORRIDOR	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1822	12 - Library	391 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1823	12 - Library	391 STAIR	3	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1824	12 - Library	349 CLASS	16	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	16	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1825	12 - Library	349 CLASS	12	I1X50R30DIM	Incandescent Fixture w/ (1) 50w Incandescent ER or BR Lamp, Dimmer Controlled	12	CF15R30SIDIM	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector, Dimmable Ballast
1826	12 - Library	354 LEARNING RESOURCE	41	FT3X40b	2'x2' Recessed Troffer w/ (3) FT40T5 Lamps & (2) Electronic Ballasts	41	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
1827	12 - Library	354 LEARNING RESOURCE	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1828	12 - Library	351 VIDEO VIEWING	1	FT3X40b	2'x2' Recessed Troffer w/ (3) FT40T5 Lamps & (2) Electronic Ballasts	1	N/R	No Retrofit Proposed
1829	12 - Library	352 VIDEO VIEWING	1	FT3X40b	2'x2' Recessed Troffer w/ (3) FT40T5 Lamps & (2) Electronic Ballasts	1	N/R	No Retrofit Proposed
1830	12 - Library	353 VIDEO VIEWING	1	FT3X40b	2'x2' Recessed Troffer w/ (3) FT40T5 Lamps & (2) Electronic Ballasts	1	N/R	No Retrofit Proposed
1831	12 - Library	357 LIBRARIAN	16	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	16	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1832	12 - Library	357 LIBRARIAN	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1833	12 - Library	360 ELEVATOR LOBBY	12	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1834	12 - Library	219 GENERAL STACKS	430	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	430	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1835	12 - Library	219 GENERAL STACKS	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
1836	12 - Library	219 GENERAL STACKS	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1837	12 - Library	219 GENERAL STACKS	5	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	5	N/R	No Retrofit Proposed
1838	12 - Library	293 STAIR	3	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1839	12 - Library	293 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1840	12 - Library	209 CORRIDOR	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1841	12 - Library	291 STAIR	4	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1842	12 - Library	218 ELEVATOR LOBBY	12	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1843	12 - Library	292 STAIR	3	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1844	12 - Library	292 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1845	12 - Library	201 VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1846	12 - Library	202 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1847	12 - Library	202 WOMEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1848	12 - Library	204 VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1849	12 - Library	203 MEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1850	12 - Library	203 MEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1851	12 - Library	212 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1852	12 - Library	213 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1853	12 - Library	214 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1854	12 - Library	211 DOCUMENTS & SERIAL	26	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	26	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1855	12 - Library	211 DOCUMENTS & SERIAL	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1856	12 - Library	210 BINDING	18	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	18	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1857	12 - Library	210 BINDING	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1858	12 - Library	215 SERIALS STAFF	8	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1859	12 - Library	216 OFFICE	8	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	8	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1860	12 - Library	130 MAIN LIBRARY & STAC	257	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	257	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1861	12 - Library	130 MAIN LIBRARY & STAC	5	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	5	N/R	No Retrofit Proposed
1862	12 - Library	130 MAIN LIBRARY & STAC	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1863	12 - Library	132 REF. STAFF OFFICE	18	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	18	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1864	12 - Library	134 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1865	12 - Library	133 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1866	12 - Library	135 OUTER LOBBY	24	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	24	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1867	12 - Library	136 VESTIBULE	8	MV175R	HID Recessed Drop-dish Fixture w/ (1) 175w Mercury Vapor Lamp & Ballast	8	N/R	No Retrofit Proposed
1868	12 - Library	137 ELEVATOR LOBBY	12	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1869	12 - Library	192 STAIR	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1870	12 - Library	192 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1871	12 - Library	192 STAIR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1872	12 - Library	101 VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1873	12 - Library	102 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1874	12 - Library	102 WOMEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1875	12 - Library	104 VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1876	12 - Library	103 MEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1877	12 - Library	103 MEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1878	12 - Library	193 STAIR	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1879	12 - Library	193 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1880	12 - Library	193 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1881	12 - Library	193 STAIR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1882	12 - Library	129B CORRIDOR	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

1883	12 - Library	129 CIRCULATION	16	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	16	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1884	12 - Library	129 CIRCULATION	12	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1885	12 - Library	128 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1886	12 - Library	127 STORAGE & DUPLICAT	13	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	13	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1887	12 - Library	127 STORAGE & DUPLICAT	4	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	4	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1888	12 - Library	191 STAIR	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1889	12 - Library	191 STAIR	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1890	12 - Library	191 STAIR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1891	12 - Library	126 CORRIDOR	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1892	12 - Library	123 BOOK PROCESSING	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1893	12 - Library	123 BOOK PROCESSING	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1894	12 - Library	123 BOOK PROCESSING	1	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1895	12 - Library	123 BOOK PROCESSING	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1896	12 - Library	117 CATALOGING	79	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	79	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1897	12 - Library	117 CATALOGING	2	B22/T8L	2'x2' Recessed Troffer w/ (2) FO17T8 Lamps & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
1898	12 - Library	117 CATALOGING	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
1899	12 - Library	115 OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1900	12 - Library	118 CORRIDOR	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1901	12 - Library	119 ADMIN OFFICES	4	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1902	12 - Library	119 ADMIN OFFICES	12	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	12	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1903	12 - Library	119 ADMIN OFFICES	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1904	12 - Library	114 STORAGE	6	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1905	12 - Library	113 OFFICE	6	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1906	12 - Library	120 OFFICE	6	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1907	12 - Library	120 OFFICE	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1908	12 - Library	121 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1909	12 - Library	122 CONFERENCE ROOM	6	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	6	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1910	12 - Library	110 OFFICE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1911	12 - Library	111 WOMEN	2	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1912	12 - Library	112 MEN	2	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1913	12 - Library	107 CORRIDOR	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1914	12 - Library	139 STORAGE	1	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1915	12 - Library	106 MAIL	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1916	12 - Library	106 MAIL	2	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1917	12 - Library	108 RECEIVING	6	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1918	12 - Library	23 GENERAL STACKS	223	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	223	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1919	12 - Library	23 GENERAL STACKS	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1920	12 - Library	23 GENERAL STACKS	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
1921	12 - Library	14 READING RESEARCH	33	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	33	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1922	12 - Library	14 READING RESEARCH	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1923	12 - Library	15 ARCHIVE OFFICE	11	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1924	12 - Library	15 ARCHIVE OFFICE	2	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	2	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1925	12 - Library	16 ARCHIVES	21	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	21	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1926	12 - Library	6A STAFF LOUNGE	2	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1927	12 - Library	6A STAFF LOUNGE	3	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1928	12 - Library	6A STAFF LOUNGE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1929	12 - Library	6 ARCHIVES	11	BU62/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast	11	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1930	12 - Library	22 CLASS	16	BU33/T8L	2'x2' Recessed Troffer w/ (3) FB32T8 3"-U Lamps & (1) Electronic Ballast	16	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
1931	12 - Library	22 CLASS	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
1932	12 - Library	93 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1933	12 - Library	13 CORRIDOR	3	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1934	12 - Library	91 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1935	12 - Library	20 ELEVATOR LOBBY	12	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1936	12 - Library	92 STAIR	1	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1937	12 - Library	1 VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1938	12 - Library	2 WOMEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1939	12 - Library	2 WOMEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1940	12 - Library	4 VESTIBULE	1	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1941	12 - Library	3 MEN	3	C42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1942	12 - Library	3 MEN	1	A44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1943	12 - Library	19A MECHANICAL	4	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1944	12 - Library	19A MECHANICAL	4	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1945	12 - Library	19 MECHANICAL	4	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1946	12 - Library	19 MECHANICAL	4	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1947	12 - Library	30 MECHANICAL	6	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1948	12 - Library	30 MECHANICAL	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1949	12 - Library	11 ELEVATOR MACHINE RC	2	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1950	12 - Library	7 MECHANICAL	10	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	10	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast

1951	12 - Library	7 MECHANICAL	2	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1952	12 - Library	7 MECHANICAL	13	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	13	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1953	12 - Library	24 ELECTRICAL	6	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1954	13 - Science Building	317 CLASS	13	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	13	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1955	13 - Science Building	315 CLASS	4	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1956	13 - Science Building	319 CLASS	3	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	3	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1957	13 - Science Building	325 CLASS	31	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1958	13 - Science Building	327 CLASS	31	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1959	13 - Science Building	333 CLASS	31	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1960	13 - Science Building	335 CLASS	31	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1961	13 - Science Building	337 GREEN HOUSE PREP	7	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1962	13 - Science Building	337A WORK ROOM	2	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1963	13 - Science Building	343 GREEN HOUSE	9	VP44/T8L	4' Vapor-Tight Wrap w/ (4) FO32T8 Lamps & (1) Electronic Ballasts	9	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1964	13 - Science Building	345 GREEN HOUSE	4	VP44/T8L	4' Vapor-Tight Wrap w/ (4) FO32T8 Lamps & (1) Electronic Ballasts	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1965	13 - Science Building	341 POTTING	4	VP44/T8L	4' Vapor-Tight Wrap w/ (4) FO32T8 Lamps & (1) Electronic Ballasts	4	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
1966	13 - Science Building	339 AV STORAGE	1	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1967	13 - Science Building	307A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1968	13 - Science Building	307B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1969	13 - Science Building	307C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1970	13 - Science Building	307D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1971	13 - Science Building	307E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1972	13 - Science Building	307F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1973	13 - Science Building	307G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1974	13 - Science Building	307H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1975	13 - Science Building	313A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1976	13 - Science Building	313B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1977	13 - Science Building	313C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1978	13 - Science Building	313D OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1979	13 - Science Building	313E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1980	13 - Science Building	313F OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1981	13 - Science Building	313G OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1982	13 - Science Building	303 OFFICE	5	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1983	13 - Science Building	305 CONFERENCE ROOM	5	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1984	13 - Science Building	309 LAB CLASS	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1985	13 - Science Building	311 LAB CLASS	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1986	13 - Science Building	321 CLASS	4	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1987	13 - Science Building	323 CLASS	10	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1988	13 - Science Building	329 LAB	11	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1989	13 - Science Building	331 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1990	13 - Science Building	347 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1991	13 - Science Building	349 PREP ROOM	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1992	13 - Science Building	351 CLASS	10	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1993	13 - Science Building	383 CORRIDOR	21	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	21	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
1994	13 - Science Building	383 CORRIDOR	18	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	18	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
1995	13 - Science Building	383 CORRIDOR	6	S21/T8L	2' Strip Fluorescent w/ (1) FO20T8 Lamp & (1) Electronic Ballast	6	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
1996	13 - Science Building	383 CORRIDOR	4	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	4	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
1997	13 - Science Building	383 CORRIDOR	3	S632/T8L	6' Strip Fluorescent w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
1998	13 - Science Building	383 CORRIDOR	1	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
1999	13 - Science Building	383 CORRIDOR	16	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	16	N/R	No Retrofit Proposed
2000	13 - Science Building	383 CORRIDOR	6	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	6	N/R	No Retrofit Proposed
2001	13 - Science Building	364 CLASS	11	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2002	13 - Science Building	300 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2003	13 - Science Building	362 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2004	13 - Science Building	372 MEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2005	13 - Science Building	372 MEN	1	V32/T8L	3' Vanity Fixture w/ (2) F25T8 Lamp & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2006	13 - Science Building	366 PREP ROOM	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2007	13 - Science Building	370 WOMEN	8	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2008	13 - Science Building	370 WOMEN	2	V32/T8L	3' Vanity Fixture w/ (2) F25T8 Lamp & (1) Electronic Ballast	2	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2009	13 - Science Building	387B COPY AREA	4	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2010	13 - Science Building	387 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2011	13 - Science Building	302 MECHANICAL	5	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2012	13 - Science Building	304 BIOLOGY STORAGE	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2013	13 - Science Building	305 STORAGE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2014	13 - Science Building	308 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2015	13 - Science Building	316 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2016	13 - Science Building	318 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2017	13 - Science Building	326 RESEARCH LAB	10	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2018	13 - Science Building	330 RESEARCH LAB	12	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

2019	13 - Science Building	338 RESEARCH LAB	12	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2020	13 - Science Building	368 PREP ROOM	5	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2021	13 - Science Building	342 COMPUTER LAB	12	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2022	13 - Science Building	348 RESEARCH LAB	10	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2023	13 - Science Building	350 RESEARCH LAB	10	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2024	13 - Science Building	354 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2025	13 - Science Building	356 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2026	13 - Science Building	360 CLASS	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2027	13 - Science Building	310 OFFICE	2	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2028	13 - Science Building	312 INCUBATOR ROOM	2	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2029	13 - Science Building	314 STORAGE	2	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2030	13 - Science Building	320 RESEARCH LAB	10	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2031	13 - Science Building	322 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2032	13 - Science Building	324 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2033	13 - Science Building	328A PREP ROOM	5	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2034	13 - Science Building	328B PREP ROOM	5	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2035	13 - Science Building	332 LAB	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2036	13 - Science Building	332A COLD ROOM	4	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2037	13 - Science Building	334 HERBARIUM	4	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2038	13 - Science Building	336 MICRO TECHNIQUE	4	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2039	13 - Science Building	340A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2040	13 - Science Building	340B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2041	13 - Science Building	340C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2042	13 - Science Building	340D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2043	13 - Science Building	340E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2044	13 - Science Building	340F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2045	13 - Science Building	340G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2046	13 - Science Building	340H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2047	13 - Science Building	344A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2048	13 - Science Building	344B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2049	13 - Science Building	344C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2050	13 - Science Building	344D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2051	13 - Science Building	344E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2052	13 - Science Building	344F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2053	13 - Science Building	344G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2054	13 - Science Building	344H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2055	13 - Science Building	346A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2056	13 - Science Building	346B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2057	13 - Science Building	346C OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2058	13 - Science Building	346D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2059	13 - Science Building	352A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2060	13 - Science Building	352B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2061	13 - Science Building	352C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2062	13 - Science Building	352D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2063	13 - Science Building	352E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2064	13 - Science Building	352F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2065	13 - Science Building	352G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2066	13 - Science Building	352H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2067	13 - Science Building	358A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2068	13 - Science Building	358B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2069	13 - Science Building	358C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2070	13 - Science Building	358D OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2071	13 - Science Building	358E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2072	13 - Science Building	358F OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2073	13 - Science Building	358G OFFICE	4	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2074	13 - Science Building	384 CORRIDOR	25	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	25	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2075	13 - Science Building	384 CORRIDOR	20	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	20	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2076	13 - Science Building	384 CORRIDOR	7	S632/T8L	6' Strip Fluorescent w/ (2) F25T8 Lamps & (1) Electronic Ballasts	7	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2077	13 - Science Building	384 CORRIDOR	12	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	12	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2078	13 - Science Building	384 CORRIDOR	13	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	13	N/R	No Retrofit Proposed
2079	13 - Science Building	384 CORRIDOR	6	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	6	N/R	No Retrofit Proposed
2080	13 - Science Building	201 LAB	31	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2081	13 - Science Building	209 LAB	31	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2082	13 - Science Building	211 CLASS	11	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2083	13 - Science Building	219 CLASS	10	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2084	13 - Science Building	223A COPY ROOM	4	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2085	13 - Science Building	223 SEMINAR	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2086	13 - Science Building	227 LAB	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

2087	13 - Science Building	231 LAB	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2088	13 - Science Building	233 CLASS	31	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2089	13 - Science Building	237 LAB	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2090	13 - Science Building	245 PREP ROOM	11	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2091	13 - Science Building	205 LAB	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2092	13 - Science Building	207 STORAGE	5	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2093	13 - Science Building	213 LOUNGE	5	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2094	13 - Science Building	215 OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2095	13 - Science Building	217A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2096	13 - Science Building	217B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2097	13 - Science Building	217C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2098	13 - Science Building	217D OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2099	13 - Science Building	217E OFFICE	4	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2100	13 - Science Building	221A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2101	13 - Science Building	221B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2102	13 - Science Building	221C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2103	13 - Science Building	221D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2104	13 - Science Building	221E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2105	13 - Science Building	221F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2106	13 - Science Building	221G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2107	13 - Science Building	225A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2108	13 - Science Building	225B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2109	13 - Science Building	225C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2110	13 - Science Building	225D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2111	13 - Science Building	225E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2112	13 - Science Building	225F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2113	13 - Science Building	225G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2114	13 - Science Building	225H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2115	13 - Science Building	229 CLASS	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2116	13 - Science Building	235 CLASS	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2117	13 - Science Building	283 CORRIDOR	19	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	19	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2118	13 - Science Building	283 CORRIDOR	15	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	15	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2119	13 - Science Building	283 CORRIDOR	5	S632/T8L	6' Strip Fluorescent w/ (2) F25T8 Lamps & (1) Electronic Ballasts	5	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2120	13 - Science Building	283 CORRIDOR	2	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2121	13 - Science Building	283 CORRIDOR	1	S21/T8L	2' Strip Fluorescent w/ (1) FO20T8 Lamp & (1) Electronic Ballast	1	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
2122	13 - Science Building	283 CORRIDOR	19	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	19	N/R	No Retrofit Proposed
2123	13 - Science Building	283 CORRIDOR	6	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	6	N/R	No Retrofit Proposed
2124	13 - Science Building	287 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2125	13 - Science Building	287B COPIER	2	V42/T8L	4' Vanity Luminaire w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2126	13 - Science Building	239 STORAGE	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2127	13 - Science Building	241 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2128	13 - Science Building	247 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2129	13 - Science Building	243 STORAGE	5	h42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2130	13 - Science Building	200 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2131	13 - Science Building	246 COMPUTER CLASSRO(	4	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2132	13 - Science Building	244 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2133	13 - Science Building	248 MEN	5	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2134	13 - Science Building	248 MEN	1	V32/T8L	3' Vanity Fixture w/ (2) F25T8 Lamp & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2135	13 - Science Building	250 WOMEN	6	w42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2136	13 - Science Building	250 WOMEN	1	v32/T8L	3' Vanity Fixture w/ (2) F25T8 Lamp & (1) Electronic Ballast	1	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2137	13 - Science Building	252	6	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2138	13 - Science Building	202 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2139	13 - Science Building	206 RESEARCH LAB	15	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	15	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2140	13 - Science Building	254 PREP ROOM	4	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	4	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2141	13 - Science Building	208 COMPUTER LAB	15	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	15	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2142	13 - Science Building	210 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2143	13 - Science Building	258 MECHANICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2144	13 - Science Building	220 PREP ROOM	11	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2145	13 - Science Building	216 LAB	31	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2146	13 - Science Building	226 LAB	27	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	27	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2147	13 - Science Building	232 LAB	31	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2148	13 - Science Building	234 LAB	31	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2149	13 - Science Building	242 COMPUTER CLASSRO(	20	A44PC/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Paracube Lens	20	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2150	13 - Science Building	242 COMPUTER CLASSRO(	6	C42P/T8L	1'x4' Pendant Mounted Box w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
2151	13 - Science Building	242 COMPUTER CLASSRO(	4	C32P/T8L	1'x3' Pendant Mounted Box w/ (2) F25T8 Lamp & (1) Electronic Ballast	4	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
2152	13 - Science Building	242 COMPUTER CLASSRO(	6	I1X50R30DIM	Incandescent Fixture w/ (1) 50w Incandescent ER or BR Lamp, Dimmer Controlled	6	CF15R30SIDIM	Relamp w/ (1) 15 watt Compact Fluorescent Screw-In, w/ R30 Reflector, Dimmable Ballast
2153	13 - Science Building	240 CLASS	10	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2154	13 - Science Building	238 LAB	12	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

2155	13 - Science Building	236 LAB	12	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2156	13 - Science Building	230 LAB	8	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2157	13 - Science Building	228 CLASS	10	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2158	13 - Science Building	224 CLASS	15	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	15	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2159	13 - Science Building	222 CLASS	15	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	15	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2160	13 - Science Building	218A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2161	13 - Science Building	218B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2162	13 - Science Building	218C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2163	13 - Science Building	218D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2164	13 - Science Building	218E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2165	13 - Science Building	218F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2166	13 - Science Building	218G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2167	13 - Science Building	214A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2168	13 - Science Building	214B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2169	13 - Science Building	214C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2170	13 - Science Building	214D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2171	13 - Science Building	214E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2172	13 - Science Building	214F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2173	13 - Science Building	214G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2174	13 - Science Building	214H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2175	13 - Science Building	214J OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2176	13 - Science Building	212A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2177	13 - Science Building	212B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2178	13 - Science Building	212C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2179	13 - Science Building	212D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2180	13 - Science Building	212E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2181	13 - Science Building	212F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2182	13 - Science Building	212G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2183	13 - Science Building	212H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2184	13 - Science Building	204A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2185	13 - Science Building	204B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2186	13 - Science Building	204C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2187	13 - Science Building	204D OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2188	13 - Science Building	204E OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2189	13 - Science Building	204F OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2190	13 - Science Building	204G OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2191	13 - Science Building	204H OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2192	13 - Science Building	284 CORRIDOR	30	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	30	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2193	13 - Science Building	284 CORRIDOR	21	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	21	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2194	13 - Science Building	284 CORRIDOR	4	S632/T8L	6' Strip Fluorescent w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2195	13 - Science Building	284 CORRIDOR	3	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	3	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2196	13 - Science Building	284 CORRIDOR	27	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	27	N/R	No Retrofit Proposed
2197	13 - Science Building	284 CORRIDOR	6	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	6	N/R	No Retrofit Proposed
2198	13 - Science Building	102 LECTURE HALL 2	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
2199	13 - Science Building	110 PREP ROOM	6	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2200	13 - Science Building	108 AV STORAGE	6	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2201	13 - Science Building	104 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2202	13 - Science Building	101 LECTURE HALL 1	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
2203	13 - Science Building	105 PREP ROOM	7	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	7	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2204	13 - Science Building	100 LOBBY	4	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	4	N/R	No Retrofit Proposed
2205	13 - Science Building	100A VESTIBULE	3	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	3	X26HDLR-7.5/	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
2206	13 - Science Building	107 AV STORAGE	2	h42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2207	13 - Science Building	109 JANITOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2208	13 - Science Building	111 CLASS	13	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	13	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2209	13 - Science Building	113 CLASS	18	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	18	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2210	13 - Science Building	181 CORRIDOR	7	BU62DD/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast, Drop Down Lens	7	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
2211	13 - Science Building	181 CORRIDOR	7	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	7	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2212	13 - Science Building	181 CORRIDOR	3	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2213	13 - Science Building	181 CORRIDOR	1	S21/T8L	2' Strip Fluorescent w/ (1) FO20T8 Lamp & (1) Electronic Ballast	1	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
2214	13 - Science Building	181 CORRIDOR	6	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
2215	13 - Science Building	181 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2216	13 - Science Building	115 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2217	13 - Science Building	117 PREP ROOM	6	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2218	13 - Science Building	121 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2219	13 - Science Building	123 CLASS	12	VP44/T8L	4' Vapor-Tight Wrap w/ (4) FO32T8 Lamps & (1) Electronic Ballasts	12	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2220	13 - Science Building	125 LAB	31	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	31	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2221	13 - Science Building	183 CORRIDOR	9	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	9	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2222	13 - Science Building	183 CORRIDOR	4	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	4	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast

2223	13 - Science Building	183 CORRIDOR	3	S632/T8L	6' Strip Fluorescent w/ (2) F25T8 Lamps & (1) Electronic Ballasts	3	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2224	13 - Science Building	183 CORRIDOR	4	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	4	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2225	13 - Science Building	183 CORRIDOR	2	S21/T8L	2' Strip Fluorescent w/ (1) FO20T8 Lamp & (1) Electronic Ballast	2	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
2226	13 - Science Building	183 CORRIDOR	2	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2227	13 - Science Building	183 CORRIDOR	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
2228	13 - Science Building	127 MECHANICAL	26	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	26	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2229	13 - Science Building	127 MECHANICAL	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2230	13 - Science Building	195 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2231	13 - Science Building	191 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2232	13 - Science Building	193 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2233	13 - Science Building	129 CLASS	19	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	19	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2234	13 - Science Building	131 CLASS	17	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	17	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2235	13 - Science Building	131A STORAGE	1	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2236	13 - Science Building	133 AV	3	h42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2237	13 - Science Building	135 HIGH BAY SHOP	12	VP44/T8L	4' Vapor-Tight Wrap w/ (4) FO32T8 Lamps & (1) Electronic Ballasts	12	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2238	13 - Science Building	185 CORRIDOR	6	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2239	13 - Science Building	185 CORRIDOR	7	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	7	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2240	13 - Science Building	185 CORRIDOR	1	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	1	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2241	13 - Science Building	185 CORRIDOR	6	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
2242	13 - Science Building	185 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2243	13 - Science Building	137 ELECTRICAL	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2244	13 - Science Building	187 CORRIDOR	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
2245	13 - Science Building	119 RECEIVING	3	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2246	13 - Science Building	119 RECEIVING	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2247	13 - Science Building	139 STORAGE	3	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2248	13 - Science Building	141 STORAGE	3	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2249	13 - Science Building	141A STORAGE	2	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2250	13 - Science Building	143 STORAGE	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2251	13 - Science Building	162 WOMEN	8	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2252	13 - Science Building	192 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2253	13 - Science Building	112 CLASS	23	A44DD/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2254	13 - Science Building	116 LAB	23	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2255	13 - Science Building	120 LAB	23	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2256	13 - Science Building	124 CLASS	11	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2257	13 - Science Building	122 LAB	6	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2258	13 - Science Building	118 TECHNOLOGICAL COLI	23	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2259	13 - Science Building	114 LAB	10	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2260	13 - Science Building	182 CORRIDOR	10	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	10	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2261	13 - Science Building	182 CORRIDOR	7	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	7	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2262	13 - Science Building	182 CORRIDOR	1	S21/T8L	2' Strip Fluorescent w/ (1) FO20T8 Lamp & (1) Electronic Ballast	1	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
2263	13 - Science Building	182 CORRIDOR	19	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	19	N/R	No Retrofit Proposed
2264	13 - Science Building	182 CORRIDOR	3	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
2265	13 - Science Building	130 WORK ROOM	11	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2266	13 - Science Building	132 PREP ROOM	12	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	12	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2267	13 - Science Building	134 LAB	6	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2268	13 - Science Building	134A STORAGE	5	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	5	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2269	13 - Science Building	194 STAIR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2270	13 - Science Building	142 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2271	13 - Science Building	140 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2272	13 - Science Building	138 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2273	13 - Science Building	136 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2274	13 - Science Building	128 LAB	2	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2275	13 - Science Building	126 LAB	8	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	8	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2276	13 - Science Building	184 CORRIDOR	10	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	10	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2277	13 - Science Building	184 CORRIDOR	3	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	3	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2278	13 - Science Building	184 CORRIDOR	17	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	17	N/R	No Retrofit Proposed
2279	13 - Science Building	184 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2280	13 - Science Building	144 CLASS	11	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2281	13 - Science Building	144A	11	A43DD/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	11	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2282	13 - Science Building	156 LAB	23	A44XDD/T8L	2'x4' Surface Mounted Box w/ (4) F32T8 Lamps & (2) Electronic Ballasts, Drop Down Lens	23	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2283	13 - Science Building	146 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2284	13 - Science Building	148B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2285	13 - Science Building	148A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2286	13 - Science Building	150 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2287	13 - Science Building	152 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2288	13 - Science Building	154 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2289	13 - Science Building	158 OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2290	13 - Science Building	158A OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit

2291	13 - Science Building	158B OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2292	13 - Science Building	158C OFFICE	2	A43XDD/T8L	2'x4' Surface Mounted Box w/ (3) F32T8 Lamps & (1) Electronic Ballast, Drop Down Lens	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2293	13 - Science Building	186 CORRIDOR	4	BU62DD/T8L	2'x2' Recessed Troffer w/ (2) FB32T8 6"-U Lamps & (1) Electronic Ballast, Drop Down Lens	4	RWB22H	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 3/17 Elec. High-Power Ballast, 2'x2' White Reflector Kit
2294	13 - Science Building	186 CORRIDOR	11	S842/T8L	8' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	11	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2295	13 - Science Building	186 CORRIDOR	7	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	7	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2296	13 - Science Building	186 CORRIDOR	1	S31/T8L	3' Strip Fluorescent w/ (1) FO25T8 Lamp & (1) Electronic Ballast	1	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2297	13 - Science Building	186 CORRIDOR	11	CF20SI	Incandescent Fixture w/ 20w Screw-In Compact Fluorescent Lamp	11	N/R	No Retrofit Proposed
2298	13 - Science Building	186 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2299	13 - Science Building	2 LOUNGE	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2300	13 - Science Building	3 VENDING	1	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2301	13 - Science Building	4 MEN	8	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2302	13 - Science Building	6 JANITOR	1	W42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2303	14 - Physical Education C	2133 POOL SPECTATOR AF	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2304	14 - Physical Education C	2134 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2305	14 - Physical Education C	2137 MECHANICAL	54	s42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	54	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2306	14 - Physical Education C	2137 MECHANICAL	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2307	14 - Physical Education C	2139 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2308	14 - Physical Education C	2140 CLASS	12	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2309	14 - Physical Education C	2100 UPPER LOBBY	10	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	10	X26HDLR-7.5/	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
2310	14 - Physical Education C	2100 UPPER LOBBY	2	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	2	X26HDLR-7.5/	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
2311	14 - Physical Education C	2100 UPPER LOBBY	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2312	14 - Physical Education C	2141 MEN	4	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2313	14 - Physical Education C	2141 MEN	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2314	14 - Physical Education C	2142 WOMEN	4	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2315	14 - Physical Education C	2142 WOMEN	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2316	14 - Physical Education C	2105 CLASS	8	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2317	14 - Physical Education C	2104 OFFICE	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2318	14 - Physical Education C	2121 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2319	14 - Physical Education C	2113 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2320	14 - Physical Education C	2101 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2321	14 - Physical Education C	2102 CLASS	12	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	12	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2322	14 - Physical Education C	2149 RUNNING TRACK	3	E2X07CF	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	3	N/R	No Retrofit Proposed
2323	14 - Physical Education C	2146 MECHANICAL	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2324	14 - Physical Education C	2146 MECHANICAL	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2325	14 - Physical Education C	1210 MAIN GYM	6	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	6	N/R	No Retrofit Proposed
2326	14 - Physical Education C	1215 AUX GYM	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
2327	14 - Physical Education C	1157 LOBBY	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2328	14 - Physical Education C	1150 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2329	14 - Physical Education C	1156 RQB COURT 1	7	mh400	HID Fixture w/ (1) 400w Metal Halide Lamp & Ballast	7	N/R	No Retrofit Proposed
2330	14 - Physical Education C	1156A RQB COURT 2	7	mh400	HID Fixture w/ (1) 400w Metal Halide Lamp & Ballast	7	N/R	No Retrofit Proposed
2331	14 - Physical Education C	1156B RQB COURT 3	7	mh400	HID Fixture w/ (1) 400w Metal Halide Lamp & Ballast	7	N/R	No Retrofit Proposed
2332	14 - Physical Education C	1156C RQB COURT 4	7	mh400	HID Fixture w/ (1) 400w Metal Halide Lamp & Ballast	7	N/R	No Retrofit Proposed
2333	14 - Physical Education C	1206 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2334	14 - Physical Education C	1201 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2335	14 - Physical Education C	1209 LOCKER ROOM - MEN	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2336	14 - Physical Education C	1193 MEN	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2337	14 - Physical Education C	1176 CORRIDOR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2338	14 - Physical Education C	1173 CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2339	14 - Physical Education C	1163 LOCKER ROOM - WOI	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2340	14 - Physical Education C	1165 WOMEN	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2341	14 - Physical Education C	1183 POOL OFFICE	6	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2342	14 - Physical Education C	1206A DISPLAY	8	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	8	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2343	14 - Physical Education C	1206B DISPLAY	6	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	6	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2344	14 - Physical Education C	1146 SWIMMING POOL	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2345	14 - Physical Education C	1106 MEN	6	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2346	14 - Physical Education C	1106 MEN	4	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2347	14 - Physical Education C	1108 WOMEN	6	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2348	14 - Physical Education C	1108 WOMEN	4	S32/T8L	3' Strip w/ (2) F25T8 Lamps & (1) Electronic Ballasts	4	LB32L	Relamp & Reballast w/ (2) F25T8 Lamps & (1) 2/25 Elec. Low-Power High Efficiency Ballast, 2x Tandem Wire
2349	14 - Physical Education C	1104 LOBBY	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2350	14 - Physical Education C	1102 LOBBY	3	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	3	N/R	No Retrofit Proposed
2351	14 - Physical Education C	1111 GENERAL SECRETAR	2	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	2	N/R	No Retrofit Proposed
2352	14 - Physical Education C	1110 OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2353	14 - Physical Education C	1114 OFFICE	1	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2354	14 - Physical Education C	1118 COPY ROOM	1	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2355	14 - Physical Education C	1119 KITCHEN	1	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2356	14 - Physical Education C	1124 OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2357	14 - Physical Education C	1121 OFFICE	4	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2358	14 - Physical Education C	1128 OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast

2359	14 - Physical Education C	1129	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2360	14 - Physical Education C	1127	CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2361	14 - Physical Education C	1125	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2362	14 - Physical Education C	1130	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2363	14 - Physical Education C	1131	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2364	14 - Physical Education C	1134	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2365	14 - Physical Education C	1132	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2366	14 - Physical Education C	1136	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2367	14 - Physical Education C	1137	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2368	14 - Physical Education C	1139	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2369	14 - Physical Education C	1140	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2370	14 - Physical Education C	1141	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2371	14 - Physical Education C	1142	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2372	14 - Physical Education C	1143	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2373	14 - Physical Education C	1144	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2374	14 - Physical Education C	1145	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2375	14 - Physical Education C	1146	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2376	14 - Physical Education C	1147	OFFICE	2	A42/T8L	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2377	14 - Physical Education C	1135	CORRIDOR	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2378	14 - Physical Education C	1101	CONTROL AREA	7	MH100DL	HID Downlight Fixture w/ (1) 100w Metal Halide Lamp & Ballast	7	X26HDLR-7.5/	Retrofit w/ Downlight Retrofit w/ (2) 26 watt CF Lamp & Electronic Ballast, 7.5 Can, Horizontal Lamp
2379	14 - Physical Education C	1101	CONTROL AREA	1	E1X08CF	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2380	14 - Physical Education C	1209	LOCKER ROOM - MEN	33	VP41/T8L	4' Vapor-Tight Wrap w/ (1) F32T8 Lamp & (1) Electronic Ballast	33	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2381	14 - Physical Education C	1198	MENS	4	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2382	14 - Physical Education C	1193	MENS	1	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2383	14 - Physical Education C	1193	MENS	3	VP41/T8L	4' Vapor-Tight Wrap w/ (1) F32T8 Lamp & (1) Electronic Ballast	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2384	14 - Physical Education C	1195	SHOWER	8	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2385	14 - Physical Education C	1163	LOCKER ROOM - WOM	33	VP41/T8L	4' Vapor-Tight Wrap w/ (1) F32T8 Lamp & (1) Electronic Ballast	33	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2386	14 - Physical Education C	1164	WOMEN	4	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2387	14 - Physical Education C	1165	WOMEN	1	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2388	14 - Physical Education C	1165	WOMEN	3	VP41/T8L	4' Vapor-Tight Wrap w/ (1) F32T8 Lamp & (1) Electronic Ballast	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2389	14 - Physical Education C	1160	SHOWER	8	VP42/T8L	4' Vapor-Tight Wrap w/ (2) F32T8 Lamps & (1) Electronic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2415	16 - Child Care Building	110	Office	4	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2416	16 - Child Care Building	122	Office	2	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2417	16 - Child Care Building	121	Conference	4	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2418	16 - Child Care Building	111	Kitchen	4	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	4	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2419	16 - Child Care Building	113	Classroom	9	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	9	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2420	16 - Child Care Building	112	Storage	1	c42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	lb42l	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2421	16 - Child Care Building	114	Toilet	1	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2422	16 - Child Care Building	118	Toilet	1	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2423	16 - Child Care Building	116	Classroom	11	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	11	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2424	16 - Child Care Building	119	Storage	1	c42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	lb42l	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2425	16 - Child Care Building	120	Mechanical	1	H42/t8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2426	16 - Child Care Building	117	Storage	1	c42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	lb42l	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2427	16 - Child Care Building	118	Mechanical	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2428	16 - Child Care Building	100	Classroom	11	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	11	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2429	16 - Child Care Building	101	Toilet	1	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2430	16 - Child Care Building	102	Toilet	1	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2431	16 - Child Care Building	103	Classroom	15	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	15	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2432	16 - Child Care Building	105	Toilet	1	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2433	16 - Child Care Building	106	Toilet	1	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2434	16 - Child Care Building	107	Classroom	10	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	10	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2435	16 - Child Care Building	107	Classroom	1	c42/T8L	1'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	lb42l	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2436	16 - Child Care Building	108	Corridor	5	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	5	rwa42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2437	16 - Child Care Building	108	Corridor	7	i1x75DL	Incandescent Downlight Fixture w/ (1) 75w Incandescent Lamp	7	CF23PAR38SI	Relamp w/ (1) 23 watt Compact Fluorescent Lamp Screw-In, 2 Piece, PAR38 Reflector
2438	16 - Child Care Building	109	Vestibule	1	i1x75DL	Incandescent Downlight Fixture w/ (1) 75w Incandescent Lamp	1	CF23PAR38SI	Relamp w/ (1) 23 watt Compact Fluorescent Lamp Screw-In, 2 Piece, PAR38 Reflector
2439	17 - Grounds & Maintenar	Women		1	B22/T8L	2'x2' Recessed Troffer w/ (2) FO17T8 Lamps & (1) Electronic Ballast	1	LC	Existing Fixture to be Retrofitted with Lighting Controls or Occupancy Sensors
2440	17 - Grounds & Maintenar	Women		1	v22/SS	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
2441	17 - Grounds & Maintenar	Men		1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2442	17 - Grounds & Maintenar	Men		1	v22/SS	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	LB22L	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast
2443	17 - Grounds & Maintenar	Locker		2	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2444	17 - Grounds & Maintenar	Locker		1	B22/T8L	2'x2' Recessed Troffer w/ (2) FO17T8 Lamps & (1) Electronic Ballast	1	N/R	No Retrofit Proposed
2445	17 - Grounds & Maintenar	Office		1	A43/T8L	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2446	17 - Grounds & Maintenar	Office		2	B22/T8L	2'x2' Recessed Troffer w/ (2) FO17T8 Lamps & (1) Electronic Ballast	2	N/R	No Retrofit Proposed
2447	17 - Grounds & Maintenar	Garage		12	mh250lb	HID Low Bay Fixture w/ (1) 250w Metal Halide Lamp & Ballast	12	vp44	New 4' Vapor-Tight Wrap Fixture w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast
2448	17 - Grounds & Maintenar	Large Repair		4	mh250lb	HID Low Bay Fixture w/ (1) 250w Metal Halide Lamp & Ballast	4	vp44	New 4' Vapor-Tight Wrap Fixture w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast
2449	17 - Grounds & Maintenar	Large Repair		2	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2450	17 - Grounds & Maintenar	Small Repair		4	mh250lb	HID Low Bay Fixture w/ (1) 250w Metal Halide Lamp & Ballast	4	vp44	New 4' Vapor-Tight Wrap Fixture w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast
2451	17 - Grounds & Maintenar	Bulk Storage		4	mh250lb	HID Low Bay Fixture w/ (1) 250w Metal Halide Lamp & Ballast	4	vp44	New 4' Vapor-Tight Wrap Fixture w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power HE Ballast

2452	17 - Grounds & Maintena	Mechanical	3	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	3	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2453	18 - Building J	J100 Vestibule	2	H44/T8L	4' Industrial Hood w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2454	18 - Building J	J102A Electricians Shop	6	H44/T8L	4' Industrial Hood w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2455	18 - Building J	J102 Trade Shop	8	H44/T8L	4' Industrial Hood w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	8	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2456	18 - Building J	J103	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2457	18 - Building J	J105B Entry	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2458	18 - Building J	J105 Trade Supervisors Offic	4	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2459	18 - Building J	J105A Storage	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2460	18 - Building J	J104 Graffic Tech Shop	2	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2461	18 - Building J	J104A Locksmith Shop	4	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2462	18 - Building J	J106 Men	1	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2463	18 - Building J	J106 Men	1	A44/EE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2464	18 - Building J	J106 Men	1	i12x40van	Incandescent Vanity Fixture w/ (12) 40w Incandescent Lamps	1	cf13sprmini/tcp	Relamp w/ (1) 13 watt Compact Fluorescent Mini Spring Lamp Screw-In, 1 Piece
2465	18 - Building J	J107 Women	2	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2466	18 - Building J	J107 Women	1	i12x40van	Incandescent Vanity Fixture w/ (12) 40w Incandescent Lamps	1	cf13sprmini/tcp	Relamp w/ (1) 13 watt Compact Fluorescent Mini Spring Lamp Screw-In, 1 Piece
2467	18 - Building J	J108 JC	1	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2468	18 - Building J	J109 Electrical	3	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2469	18 - Building J	J110 Dance Studio	15	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	15	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2470	18 - Building J	J111 Dance Studio	27	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	27	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2471	18 - Building J	J112 Office	6	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	6	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2472	18 - Building J	J101 Corridors	10	a44/T8L	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	10	RWA42	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast, 2'x4' White Reflector Kit
2473	18 - Building J	J101 Corridors	3	e2x25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	3	N/R	No Retrofit Proposed
2474	19 - Building I	I105 Men	1	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2475	19 - Building I	I106 Women	1	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2476	19 - Building I	I107 Storage	1	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2477	19 - Building I	I104 Storage	1	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2478	19 - Building I	I102A Corridor	1	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2479	19 - Building I	I102 Office	3	W44/EE	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2480	19 - Building I	I102 Office	1	W44/T8L	4' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2481	19 - Building I	I102 Office	1	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2482	19 - Building I	I102 Office	1	w42/T8L	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	lb42l	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2483	19 - Building I	I110 Office	2	W44/EE	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2484	19 - Building I	I112 Office	3	W44/T8L	4' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	3	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2485	19 - Building I	I112 Office	1	W44/EE	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2486	19 - Building I	I101 Vestibule	1	W44/EE	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	LB44L	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-Power High Efficiency Ballast
2487	19 - Building I	Exits	4	e2x25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	4	N/R	No Retrofit Proposed
2488	20 - Center for Inner City	U601 Book Stacks	9	i1x60	Incandescent Fixture w/ (1) 60w Incandescent Lamp	9	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
2489	20 - Center for Inner City	U601 Book Stacks	9	i1x60	Incandescent Fixture w/ (1) 60w Incandescent Lamp	9	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
2490	20 - Center for Inner City	U604 Storage	1	s882/EE	8' Strip Fluorescent w/ (2) F96T12/65w Lamps & (1) Energy Efficient Magnetic Ballast	1	cks844	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Normal-Power High Efficiency Ballast, Strip Centering Kit
2491	20 - Center for Inner City	U697 Stairs	5	i3x60	Incandescent Fixture w/ (3) 60w Incandescent Lamps	5	cf3-13si	Relamp w/ (3) 13 watt Compact Fluorescent Screw-In
2492	20 - Center for Inner City	Penthouse	6	i1x300b	Incandescent Bare Lamp Fixture w/ (1) 300w Incandescent PS Lamp	6	CF42SI	Relamp w/ (1) 42 watt Compact Fluorescent Screw-In
2493	20 - Center for Inner City	U652 Electric	1	i2x60dr	Incandescent Drum Fixture w/ (2) 60w Incandescent Lamps	1	CF2-13SI	Relamp w/ (2) 13 watt Compact Fluorescent Screw-In
2494	20 - Center for Inner City	604A Control Desk	4	i1x60dl	Incandescent Downlight Fixture w/ (1) 60w Incandescent Lamp	4	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
2495	20 - Center for Inner City	604A Control Desk	4	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	4	N/R	No Retrofit Proposed
2496	20 - Center for Inner City	602 Reading	12	i1x60	Incandescent Fixture w/ (1) 60w Incandescent Lamp	12	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
2497	20 - Center for Inner City	602 Reading	8	i1x300	Incandescent Fixture w/ (1) 300w Incandescent PS Lamp	8	CF42SI	Relamp w/ (1) 42 watt Compact Fluorescent Screw-In
2498	20 - Center for Inner City	613 Reading	12	i1x60	Incandescent Fixture w/ (1) 60w Incandescent Lamp	12	CF13SI	Relamp w/ (1) 13 watt Compact Fluorescent Screw-In
2499	20 - Center for Inner City	613 Reading	8	i1x300	Incandescent Fixture w/ (1) 300w Incandescent PS Lamp	8	CF42SI	Relamp w/ (1) 42 watt Compact Fluorescent Screw-In
2500	20 - Center for Inner City	503 Classroom	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2501	20 - Center for Inner City	503 Classroom	3	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	3	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2502	20 - Center for Inner City	502 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2503	20 - Center for Inner City	502 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2504	20 - Center for Inner City	504 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2505	20 - Center for Inner City	504 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2506	20 - Center for Inner City	520 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2507	20 - Center for Inner City	520 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2508	20 - Center for Inner City	521 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2509	20 - Center for Inner City	521 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2510	20 - Center for Inner City	403A Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2511	20 - Center for Inner City	403A Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2512	20 - Center for Inner City	403B Classroom	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2513	20 - Center for Inner City	402 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2514	20 - Center for Inner City	402 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2515	20 - Center for Inner City	408 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2516	20 - Center for Inner City	408 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2517	20 - Center for Inner City	407 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2518	20 - Center for Inner City	407 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2519	20 - Center for Inner City	406 Classroom	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast

2520	20 - Center for Inner City	406 Classroom	2	S31/SS	3' Strip Fluorescent w/ (1) F30T12 Lamp & (1) Standard Magnetic Ballast	2	LB31L	Relamp & Reballast w/ (1) F25T8 Lamps & (1) 1/25 Elec. Low-Power High Efficiency Ballast
2521	20 - Center for Inner City	211 Classroom	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2522	20 - Center for Inner City	211 Classroom	1	S21/SS	2' Strip Fluorescent w/ (1) F20T12 Lamp (1) Standard Magnetic Ballast	1	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
2523	20 - Center for Inner City	120 Lobby	9	i1x60G	Incandescent Globe Fixture w/ (1) 60w Incandescent Lamp	9	CF14G40SI	Relamp w/ (1) 14 watt Compact Fluorescent Screw-In, w/ G40 Globe Reflector
2524	20 - Center for Inner City	120 Lobby	4	i1x75R40	Incandescent Fixture w/ (1) 75w Incandescent Lamp	4	CF20R40SI	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ R40 Reflector
2525	20 - Center for Inner City	111 Vestibule	6	i1x60G	Incandescent Globe Fixture w/ (1) 60w Incandescent Lamp	6	CF14G40SI	Relamp w/ (1) 14 watt Compact Fluorescent Screw-In, w/ G40 Globe Reflector
2526	20 - Center for Inner City	111 Vestibule Exterior	2	i1x200	Incandescent Fixture w/ (1) 200w Incandescent Lamp	2	CF32SI	Relamp w/ (1) 32 watt Compact Fluorescent Screw-In
2527	20 - Center for Inner City	117 Kemetic Institute	4	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	4	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2528	20 - Center for Inner City	117 Kemetic Institute	2	S21/SS	2' Strip Fluorescent w/ (1) F20T12 Lamp (1) Standard Magnetic Ballast	2	LB21L	Relamp & Reballast w/ (1) F17T8 Lamp & (1) 1/17 Elec. Low-Power High Efficiency Ballast
2529	20 - Center for Inner City	193 Stairs	3	i1x60G	Incandescent Globe Fixture w/ (1) 60w Incandescent Lamp	3	CF14G40SI	Relamp w/ (1) 14 watt Compact Fluorescent Screw-In, w/ G40 Globe Reflector
2530	20 - Center for Inner City	194 Stairs	3	i1x60G	Incandescent Globe Fixture w/ (1) 60w Incandescent Lamp	3	CF14G40SI	Relamp w/ (1) 14 watt Compact Fluorescent Screw-In, w/ G40 Globe Reflector
2531	20 - Center for Inner City	B20 Electrical	4	i1x300b	Incandescent Bare Lamp Fixture w/ (1) 300w Incandescent PS Lamp	4	CF42SI	Relamp w/ (1) 42 watt Compact Fluorescent Screw-In
2532	20 - Center for Inner City	B21 Chiller	4	i1x300b	Incandescent Bare Lamp Fixture w/ (1) 300w Incandescent PS Lamp	4	CF42SI	Relamp w/ (1) 42 watt Compact Fluorescent Screw-In
2533	20 - Center for Inner City	130 Stair	21	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	21	N/R	No Retrofit Proposed
2534	20 - Center for Inner City	135 Stair	19	cf13si	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	19	N/R	No Retrofit Proposed
2535	20 - Center for Inner City	100 Vestibule Exterior	11	i1x60G	Incandescent Globe Fixture w/ (1) 60w Incandescent Lamp	11	CF14G40SI	Relamp w/ (1) 14 watt Compact Fluorescent Screw-In, w/ G40 Globe Reflector
2536	21 - Tunnel Lighting	CORRIDOR TUNNEL A - C	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2537	21 - Tunnel Lighting	CORRIDOR TUNNEL A - C	8	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	8	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2538	21 - Tunnel Lighting	CORRIDOR TUNNEL A - C	4	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2539	21 - Tunnel Lighting	BUILDING 1C TUNNEL	16	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	16	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2540	21 - Tunnel Lighting	BUILDING 1C TUNNEL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2541	21 - Tunnel Lighting	BUILDING 1C TUNNEL	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2542	21 - Tunnel Lighting	BUILDING C CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2543	21 - Tunnel Lighting	BUILDING C CORRIDOR	1	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2544	21 - Tunnel Lighting	BUILDING C CORRIDOR	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2545	21 - Tunnel Lighting	BUILDING C CORRIDOR	3	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2546	21 - Tunnel Lighting	BUILDING C CORRIDOR	3	W42/EE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2547	21 - Tunnel Lighting	BUILDING C CORRIDOR	1	H42/EE	4' Industrial Hood w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2548	21 - Tunnel Lighting	BUILDING C CORRIDOR	1	S842/EE	8' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2549	21 - Tunnel Lighting	BUILDING C CORRIDOR	1	W848/EE	8' Wrap Fluorescent w/ (8) F40T12/34w Lamps & (4) Energy Efficient Magnetic Ballasts	1	LB848L	Relamp & Reballast an 8' Fixture w/ (8) F32T8 Lamps & (2) 4/32 Elec. Low-Power High Efficiency Ballasts
2550	21 - Tunnel Lighting	BUILDING D 31 TUNNEL	5	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	5	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2551	21 - Tunnel Lighting	BUILDING D 2 TUNNEL	6	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2552	21 - Tunnel Lighting	BUILDING D 2 TUNNEL	4	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	4	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2553	21 - Tunnel Lighting	BUILDING D 2 TUNNEL	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2554	21 - Tunnel Lighting	BUILDING D 6 TUNNEL	4	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2555	21 - Tunnel Lighting	BUILDING D 6 TUNNEL	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2556	21 - Tunnel Lighting	BUILDING D 6 TUNNEL	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2557	21 - Tunnel Lighting	BUILDING E 84 CORRIDOR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2558	21 - Tunnel Lighting	BUILDING E 84 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2559	21 - Tunnel Lighting	BUILDING E 89 CORRIDOR	2	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2560	21 - Tunnel Lighting	BUILDING E 83 CORRIDOR	8	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	8	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2561	21 - Tunnel Lighting	BUILDING E 83 CORRIDOR	2	e2x07cf	Exit Sign w/ (2) 7 Watt Compact Fluorescent Lamps	2	N/R	No Retrofit Proposed
2562	21 - Tunnel Lighting	BUILDING E 77 CORRIDOR	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2563	21 - Tunnel Lighting	BUILDING E 77 CORRIDOR	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2564	21 - Tunnel Lighting	BUILDING E 77 CORRIDOR	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2565	21 - Tunnel Lighting	BUILDING E 79 CORRIDOR	2	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2566	21 - Tunnel Lighting	BUILDING E 79 CORRIDOR	8	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	8	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2567	21 - Tunnel Lighting	BUILDING E 79 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2568	21 - Tunnel Lighting	BUILDING E 12 CORRIDOR	6	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2569	21 - Tunnel Lighting	BUILDING E 12 CORRIDOR	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2570	21 - Tunnel Lighting	BUILDING E 4 CORRIDOR	6	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	6	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2571	21 - Tunnel Lighting	BUILDING E 4 CORRIDOR	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2572	21 - Tunnel Lighting	BUILDING E 6 CORRIDOR	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2573	21 - Tunnel Lighting	BUILDING E 6 CORRIDOR	1	e1x08cf	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2574	21 - Tunnel Lighting	BUILDING E 19 RAMP	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2575	21 - Tunnel Lighting	BUILDING E 19 RAMP	1	e1x08cf	Exit Sign w/ (1) 8 Watt Compact Fluorescent Lamp	1	N/R	No Retrofit Proposed
2576	21 - Tunnel Lighting	BUILDING E 19 RAMP	2	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2577	21 - Tunnel Lighting	LIBRARY 10 TUNNEL	8	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	8	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2578	21 - Tunnel Lighting	LIBRARY 10 TUNNEL	4	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2579	21 - Tunnel Lighting	LIBRARY 10 TUNNEL	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2580	21 - Tunnel Lighting	T1 TUNNEL SECTION 1	11	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	11	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2581	21 - Tunnel Lighting	T2 TUNNEL SECTION 2	8	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	8	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2582	21 - Tunnel Lighting	T2 TUNNEL SECTION 2	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2583	21 - Tunnel Lighting	T2 TUNNEL SECTION 2	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2584	21 - Tunnel Lighting	T3 TUNNEL SECTION 3	3	H42/T8L	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2585	21 - Tunnel Lighting	T4 TUNNEL SECTION 4	12	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	12	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2586	21 - Tunnel Lighting	T4 TUNNEL SECTION 4	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2587	21 - Tunnel Lighting	T5 TUNNEL SECTION 5	5	S42/EE	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	5	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast

2588	21 - Tunnel Lighting	T5 TUNNEL SECTION 5	1	S42/T8L	4' Strip Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	LB42L	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast
2589	21 - Tunnel Lighting	T5 TUNNEL SECTION 5	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2590	21 - Tunnel Lighting	T6 TUNNEL SECTION 6	20	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	20	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2591	21 - Tunnel Lighting	T6 TUNNEL SECTION 6	2	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	2	N/R	No Retrofit Proposed
2592	21 - Tunnel Lighting	T7 TUNNEL SECTION 7	8	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	8	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2593	21 - Tunnel Lighting	T7 TUNNEL SECTION 7	1	S41/T8L	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2594	21 - Tunnel Lighting	T7 TUNNEL SECTION 7	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2595	21 - Tunnel Lighting	T8 TUNNEL SECTION 8	1	S41/EE	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	LB41L	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast
2596	21 - Tunnel Lighting	T8 TUNNEL SECTION 8	1	E2X25	Exit Sign w/ (2) 25 Watt Incandescent Lamps	1	N/R	No Retrofit Proposed
2597	22 - Site Lighting	CAMPUS WALKWAYS	70	hps150	HID Fixture w/ (1) 150w High Pressure Sodium	70	N/R	No Retrofit Proposed
2598	22 - Site Lighting	CAMPUS WALKWAYS	75	mh150	HID Fixture w/ (1) 150w Metal Halide Lamp & Ballast	75	N/R	No Retrofit Proposed
2599	22 - Site Lighting	ROADWAY	13	hps400cobra	HID Fixture w/ (1) 400w High Pressure Sodium, Cobra Head Street Light	13	N/R	No Retrofit Proposed
2600	22 - Site Lighting	PARKING LOTS	60	mh400	HID Fixture w/ (1) 400w Metal Halide Lamp & Ballast	60	N/R	No Retrofit Proposed
2601	22 - Site Lighting	LOT C	5	mh175	HID Fixture w/ (1) 175w Metal Halide Lamp & Ballast	5	N/R	No Retrofit Proposed
2602	22 - Site Lighting	LOT C	8	mh175	HID Fixture w/ (1) 175w Metal Halide Lamp & Ballast	8	N/R	No Retrofit Proposed
2603	22 - Site Lighting	LOT A	5	mh175	HID Fixture w/ (1) 175w Metal Halide Lamp & Ballast	5	N/R	No Retrofit Proposed
2604	22 - Site Lighting	LOT E	2	mh175	HID Fixture w/ (1) 175w Metal Halide Lamp & Ballast	2	N/R	No Retrofit Proposed

ECM 5 WATER EFFICIENCY UPGRADES

OVERVIEW

NORESCO has conducted a water fixture audit of the buildings at the Northeastern Illinois University (NEIU) main campus and found that most of the existing water fixtures throughout campus are standard flow rate type or low flow rate type with standard flow flush valves.

NORESCO conducted a comprehensive water conversation evaluation in each of the selected buildings. The program will reduce unnecessary water and energy use, minimize maintenance requirements, and provide the facilities with new, more attractive plumbing fixtures.

The scope of our proposed water efficiency upgrades includes the buildings listed below.

Location	Building	Measure Description
Main Campus	Building A	No upgrades proposed
Main Campus	Building B	Toilet, Urinal and Aerator upgrade
Main Campus	Building C	Toilet, Urinal and Aerator upgrade
Main Campus	Building D	Toilet, Urinal and Aerator upgrade
Main Campus	Building E	Toilet, Urinal and Aerator upgrade
Main Campus	Building F	No upgrades proposed
Main Campus	Building H	Toilet, Urinal and Aerator upgrade
Main Campus	Fine Arts Building	Toilet, Urinal and Aerator upgrade
Main Campus	Student Union	No upgrades proposed
Main Campus	Lech Walesa Hall	Toilet, Urinal and Aerator upgrade
Main Campus	Parking Facility	Toilet, Urinal and Aerator upgrade
Main Campus	Library	Toilet, Urinal and Aerator upgrade
Main Campus	Science Building	Toilet, Urinal and Aerator upgrade
Main Campus	Physical Education Complex	Toilet, Urinal and Aerator upgrade
Main Campus	Child Care Center	Toilet, Urinal and Aerator upgrade
Main Campus	Grounds & Maintenance	Toilet, Urinal and Aerator upgrade
Main Campus	Building J	Toilet, Urinal and Aerator upgrade
Main Campus	Building I	Toilet, Urinal and Aerator upgrade
South Campus	Center for Inner City Studies	No upgrades proposed

DETAILED DESCRIPTION

Existing Conditions

During the energy audit, NORESCO conducted a survey of the plumbing fixtures at the selected buildings. A visual inspection was made of toilets, urinals, showers, and faucets and measurements were performed of current flow rates in gallons per minute (gpm) and gallons per flush (gpf). The majority of the plumbing fixtures were found to have a high rate of water consumption. Although some of the china we observed was rated for low flow, the existing stock of replacement diaphragms were rated for higher flow. These higher flow rates were verified during our field measurements.

Current state codes require the use of low-flow water fixtures in all new construction. Although these codes are not retroactive, the replacement of older, high-consumption water fixtures with new, low-flow units can result in significant water cost savings.

Proper pairing of new toilets and flush valves can achieve effective flush performance using 1.6 gallons per flush (gpf) or lower, as opposed to the current 3.5 to 5.0 gpf for existing toilets. Urinals can be upgraded with new flush valves to reduce water consumption at each to 1/8 gpf. Existing faucets can be retrofitted with aerators to reduce water consumption and maintain fixture performance. Aerators also reduce thermal energy consumption by reducing domestic hot water heating requirements.

The urinals in Lech Walesa Hall and the Science Building utilize flush tanks, which fill and flush 24 hours per day with timed control.

Proposed Scope of Work

NORESCO proposes to implement a water conservation project at NEIU that will include:

- Installation of 327 new ultra low flow (1.28 gpf) toilet china and flush valves
- Installation of 78 new ultra-low flow (.125 gpf) urinal china and flush valves
- Installation of 258 new low flow (.5 gpm) lavatory faucet aerators
- Installation of automatic battery operated flush sensors for toilets and urinals

Exclusions to the proposed fixture replacement work include:

- No work in Building A, where water fixtures are brand new
- No work in Building F, per University direction
- No work in Student Union, where hard-wired sensors

- No replacement of tank-type urinal flush in LWH and Science building due to poor economics
- No work in CCICS

Replacement of these water fixtures and plumbing components will dramatically improve the water efficiency of the campus by as much as 50% in some buildings. NORESCO will provide new toilets, new urinals, and new lavatory aerator. The new fixtures and valves will be low-flow devices conforming to the latest standards. This action will reduce unnecessary water and energy use, minimize maintenance requirements, and provide the facilities with new, more attractive plumbing fixtures. The replacement components will provide flushing action to adequately remove waste, and will be consistent with the fixtures in the new buildings. Below is a brief description of the work proposed Northeastern Illinois University.

Toilet China and Flush Valve Replacement

Most of the toilets surveyed were wall-mounted china with either manual or automatic flush valves. Most toilets are of the older conventional technology and do not comply with today's low flow technology. The existing flush valves are rated for at least 3.5 gpf. Field measurements indicated flow rates of 3.5 gpf or higher, on average.

In general, NORESCO will replace the existing 3.5 gpf toilets with new ultra-low flush toilets in areas indicated above. These toilets are designed to operate with 1.28 gpf. The old toilets will be removed and disposed. New toilets will be installed with the joint between the wall, or floor, caulked tight. New outlet seals will be installed. New toilet seats with stainless steel hardware will be installed. Existing flushometer valves will be replaced with 1.28 gpf flushometer kit that utilizes piston technology.

NORESCO will replace the existing children's floor mounted toilets, located in the Child Care Center, with new low flush (LF) toilets. These toilets are designed to operate with 1.6 gpf. The old toilets will be removed. New toilets will be installed with the joint between the floor caulked tight. New outlet seals will be installed. New toilet seats with stainless steel hardware will be installed. Existing flushometer valves will be replaced with 1.6 gpf flushometer kit that utilizes piston technology. The piston type flush valves last longer and are more accurate than the old diaphragm type currently used.

NORESCO will replace the existing tank toilets, located in Building E and the Grounds & Maintenance Building, with new 1.1 gpf, pressure assisted, ultra-low flush toilets. The old toilets will be removed. New toilets will be installed with the joint between the wall, or floor, caulked tight. New outlet seals will be installed. New toilet seats with stainless steel hardware will be installed.

The proposed scope of work for toilet replacement includes the following:

- Close and secure the water shut-off valve (angle stop) in preparation for toilet removal.

- Remove and dispose of all mechanisms that secure the existing equipment to the wall/floor location.
- Disconnect the supply water and drain piping at the existing wall and floor stubs in preparation for removal.
- Dislodge and remove the existing toilet from its wall/floor location.
- Remove and dispose of the discarded equipment and associated components.
- Locate and secure the new low-flow toilet unit.
- Install new toilet seat.
- Complete all pipe connections from the existing wall stub and drain location to the new toilet.
- Replace the flush valve (if angle stop will not hold or is leaking the Subcontractor shall replace it).

Urinal China and Flush Valve Replacement

The existing urinals are comprised of wall-hung urinals with manual or automatic flush valves. Many of the flush valves are of the older conventional technology and do not comply with today's low flow technology. Most of the existing urinal china can accommodate the low flow technology. The existing flush valves are rated to use at least 1.5 gpf. Field measurements indicated flow rates of 1.5 gpf or higher, on average.

NORESCO will replace the existing urinal china and flush valve on the urinals with a new 1/8 gpf china and a matching piston type flush valve. The piston type flush valves last longer and are more accurate than the old diaphragm type currently used.

The urinal valve replacement will include all the chrome beyond the angle stop. If the angle stop does not hold or is leaking then it too will be replaced.

The proposed scope of work for urinal replacement includes the following:

- Close and secure the water shut-off valve (angle stop) in preparation for urinal removal.
- Remove and dispose of all mechanisms that secure the existing equipment to the wall location.
- Disconnect the supply water and drain piping at the existing wall and floor stubs in preparation for removal.
- Dislodge and remove the existing urinal from its wall location.
- Remove and dispose of the discarded equipment and associated components.
- Locate and secure the new low-flow urinal unit.
- Complete all pipe connections from the existing wall stub and drain location to the new urinal.

- Replace the flush valve (if angle stop will not hold or is leaking the Subcontractor shall replace it).

Aerator Replacement

Most of the existing lavatory faucets that have 2.5 gpm. aerators or do not have any type of flow restricting devices installed at all. Faucets with existing flow restricting devices were estimated to consume at least 2.5 gpm. Field measurements indicated flow rates of 2.5 gpf or higher on average.

NORESCO will install faucet flow restrictors, rated at .5 gpm on sinks where possible. The new faucet flow restrictors are aerating and introduce air into the stream of water. The restrictors are pressure-compensating and flow controlled. Adapters are used to allow for different pipe size and male or female connections. New faucet aerators will be vandal-proof models.

Tank-Type Flush

Lech Walesa Hall and the Science Building currently utilize tank-type flushing for the urinals. With this system, one or more water tanks fill-up and the urinals on a regular frequency throughout the day, even when the building is not occupied. This is a wasteful flushing system. Two solutions to this water waste were considered:

a) Re-pipe the urinal flush system to individual flush valves

b) Install solenoid control valve triggered by occupancy sensor, door opening or time clock.

Unfortunately neither solution was found to be practical. Water savings are not high enough to economically justify re-piping of the flush system. Due to existing pipe size and inaccessiblity of the piping, there is no practical spot to install a solenoid control valve.

FACILITY IMPACT

Work performed under this ECM will be completed during normal business hours or as directed by the facility. NORESCO will sequence the toilet replacements on a bathroom-by-bathroom basis to minimize the inconvenience to the building occupants. Work will be coordinated with facility maintenance personnel in order to minimize the impact on staff and residents. Overall maintenance on plumbing systems will be greatly reduced.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

Impact on Facility Operations and Performance

The facility will benefit from reduced water consumption and reduced maintenance for new fixtures and valves. Modern toilet fixtures have been designed to efficiently flush waste with much less water, although a brief period of testing and calibration may be required to balance the building water. Retrofit of the sink aerators will also save thermal energy, by reducing the amount of hot water consumed.

Special Operating Requirements

No special operating requirements are associated with this measure.

EQUIPMENT INFORMATION

Manufacturer Specification

NORESCO proposes to install toilets manufactured by American Standard, Zurn, or Toto USA, or equal and flush valves as manufactured by Sloan, Zurn, Toto USA or equal.

COMMISSIONING PROCEDURE

All newly installed equipment will be visually inspected by the NORESCO Project Manager and the installation technicians, with corroboration by NEIU personnel.

ENVIRONMENTAL ISSUES

No adverse environmental impacts are expected.

The debris from this measure will be disposed in accordance with the City of Chicago's recycling ordinance and construction or demolition site waste recycling ordinance and documentate its compliance with such requirements.

CUSTOMER TRAINING

Customer training will be provided to ensure that facility staff fully understands the operation of the new equipment.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

A	B	C	D	E	F	G	H	I	J	K

Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	6	B - Building B	B161	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	7	B - Building B	B161	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	8	B - Building B	B163B	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	9	B - Building B	B163B	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	10	B - Building B	B138 Kitchen	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	**Project Phase**	**Measure No.**	**Bldg Name**	**Area Location**	**Fixture Type**	**Fixt Qty**	**Pre Code**	**Existing Description**	**Post Code**	**Post Description**
NEIU	DO1	11	B - Building B	B115 Men	Toilet	2	TVT4WMRDSEO/SFT-ESA21/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 21" Length	TVT4WMRDEO1.3-ESA21-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 21" Length
NEIU	DO1	12	B - Building B	B115 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA21/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 21" Length	TVT4WMRDEO1.3-EHA21-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 21" Length
NEIU	DO1	13	B - Building B	B115 Men	Urinal	5	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	14	B - Building B	B115 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	15	B - Building B	B115 Men	Faucet	0	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed

A	B	C	D	E	F	G	H	I	J	K

Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	16	B - Building B	B112 Women	Toilet	9	TVT4WMRDSEO/SFT-ESA21/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 21" Length	TVT4WMRDEO1.3-ESA21-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 21" Length
NEIU	DO1	17	B - Building B	B112 Women	Faucet	0	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	18	C - Building C	C604 Women	Toilet	2	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	19	C - Building C	C604 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	20	C - Building C	C606 Coffee	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	21	C - Building C	C608 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	22	C - Building C	C608 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	23	C - Building C	C608 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	24	C - Building C	C504 Women	Toilet	2	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	25	C - Building C	C504 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	26	C - Building C	C506 Coffee	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	27	C - Building C	C508 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	28	C - Building C	C508 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	29	C - Building C	C508 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	30	C - Building C	C404 Women	Toilet	2	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	31	C - Building C	C404 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	32	C - Building C	C406 Coffee	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	33	C - Building C	C408 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	34	C - Building C	C408 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	35	C - Building C	C408 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	36	C - Building C	C304 Women	Toilet	2	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	37	C - Building C	C304 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	38	C - Building C	C308 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	39	C - Building C	C308 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	40	C - Building C	C308 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	41	C - Building C	C204 Women	Toilet	2	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	42	C - Building C	C204 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	43	C - Building C	C208 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	44	C - Building C	C208 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	45	C - Building C	C208 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	46	C - Building C	C214 Toilet	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	47	C - Building C	C214 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	48	C - Building C	C104 Toilet	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	49	C - Building C	C104 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	50	C - Building C	C106 Coffee	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	51	C - Building C	C108 Toilet	Urinal	2	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	52	C - Building C	C108 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	53	D - Building D	D0037 Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	54	D - Building D	D0037 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	55	D - Building D	D0038 Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	56	D - Building D	D0038 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	57	D - Building D	D0105 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	58	D - Building D	D0105 Men	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	59	D - Building D	D0105 Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	60	D - Building D	D0106 Women	Toilet	3	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	61	D - Building D	D0106 Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	62	E - Building E	E217 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	63	E - Building E	E217 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	64	E - Building E	E217 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	65	E - Building E	E215 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	66	E - Building E	E215 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	67	E - Building E	E105 Men	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	68	E - Building E	E105 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	69	E - Building E	E105 Men	Urinal	5	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	70	E - Building E	E105 Men	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	71	E - Building E	E104 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	72	E - Building E	E104 Women	Toilet	6	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	73	E - Building E	E104 Women	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	74	E - Building E	E010 Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	75	E - Building E	E010 Toilet	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	76	E - Building E	E010 Toilet	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	77	E - Building E	E002A Mens Dressing Room	Faucet	0	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	78	E - Building E	E002B Mens Dressing Room	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	79	E - Building E	E003A Womens Dressing Room	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	80	E - Building E	E003B Womens Dressing Room	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	81	E - Building E	E006 Green Room	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	82	E - Building E	E0026A Toilet	Toilet	2	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	83	E - Building E	E0026A Toilet	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	84	E - Building E	E054 Toilet	Toilet	1	TTG2FMBD12SEO/SFT	Standard Flow Gravity Tank Toilet w/ 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Standard Rim Height, Elongated Open Seat	TTP2FMBD12SEO1.1	New 1.1 gpf Pressure-Assist Tank High Efficiency Toilet (HET) w/ 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Standard Rim Height, Elongated Open Seat
NEIU	DO1	85	E - Building E	E054 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	86	E - Building E	E055A Exam #1	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	87	E - Building E	E055B Exam #2	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	93	H - Building H	H104 Corridor	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	94	H - Building H	H115 Mens Locker	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	95	H - Building H	H115 Mens Locker	Toilet	2	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	96	H - Building H	H115 Mens Locker	Urinal	2	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	97	H - Building H	H115 Mens Locker	Shower	1	SH/ULF	Ultra Low Flow Showerhead	N/R	No Retrofit Proposed
NEIU	DO1	98	H - Building H	H111 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	99	H - Building H	H111 Women	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	100	H - Building H	H001E Toilet	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	101	H - Building H	H001E Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	102	FA - Fine Arts Building	FA250 Women	Toilet	5	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	103	FA - Fine Arts Building	FA250 Women	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	104	FA - Fine Arts Building	FA250 Women	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	105	FA - Fine Arts Building	FA250 Women	Faucet	0	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	106	FA - Fine Arts Building	FA248 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA13/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 13" Length	TVT4WMRDEO1.3-EHA13-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 13" Length
NEIU	DO1	107	FA - Fine Arts Building	FA248 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	108	FA - Fine Arts Building	FA248 Men	Urinal	6	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	109	FA - Fine Arts Building	FA248 Men	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	110	FA - Fine Arts Building	FA222 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	111	FA - Fine Arts Building	FA222 Women	Toilet	1	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	112	FA - Fine Arts Building	FA222 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	113	FA - Fine Arts Building	FA222 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	114	FA - Fine Arts Building	FA221 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	115	FA - Fine Arts Building	FA221 Men	Urinal	2	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	116	FA - Fine Arts Building	FA221 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	117	FA - Fine Arts Building	FA102 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	118	FA - Fine Arts Building	FA102 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	119	FA - Fine Arts Building	FA102 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	120	FA - Fine Arts Building	FA102 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	121	FA - Fine Arts Building	FA102 Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	122	FA - Fine Arts Building	FA103 Women	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	123	FA - Fine Arts Building	FA103 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	124	FA - Fine Arts Building	FA103 Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	125	FA - Fine Arts Building	FA139 Men	Toilet	4	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	126	FA - Fine Arts Building	FA139 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	127	FA - Fine Arts Building	FA139 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	128	FA - Fine Arts Building	FA139 Men	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	129	FA - Fine Arts Building	FA140 Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	130	FA - Fine Arts Building	FA140 Women	Toilet	1	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	131	FA - Fine Arts Building	FA140 Women	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	132	FA - Fine Arts Building	FA141F Womens Locker	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	133	FA - Fine Arts Building	FA141E Mens Locker	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	134	FA - Fine Arts Building	FA149 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	135	FA - Fine Arts Building	FA149 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	136	FA - Fine Arts Building	FA149 Men	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	137	FA - Fine Arts Building	FA149 Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	138	FA - Fine Arts Building	FA151 Women	Toilet	3	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	139	FA - Fine Arts Building	FA151 Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	140	FA - Fine Arts Building	FA151 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	141	FA - Fine Arts Building	FA151 Women	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	142	FA - Fine Arts Building	FA160H Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	143	FA - Fine Arts Building	FA160H Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	167	CLS - Classroom Building	CLS4115 Women	Toilet	8	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	168	CLS - Classroom Building	CLS4115 Women	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	169	CLS - Classroom Building	CLS4112 Men	Toilet	4	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	170	CLS - Classroom Building	CLS4112 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	171	CLS - Classroom Building	CLS4112 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	172	CLS - Classroom Building	CLS4112 Men	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	173	CLS - Classroom Building	CLS3115 Women	Toilet	8	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	174	CLS - Classroom Building	CLS3115 Women	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	175	CLS - Classroom Building	CLS3112 Men	Toilet	4	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	176	CLS - Classroom Building	CLS3112 Men	Toilet	1	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	177	CLS - Classroom Building	CLS3112 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	178	CLS - Classroom Building	CLS3112 Men	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	179	CLS - Classroom Building	CLS2115 Women	Toilet	8	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	180	CLS - Classroom Building	CLS2115 Women	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	181	CLS - Classroom Building	CLS2112 Men	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	182	CLS - Classroom Building	CLS2112 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	183	CLS - Classroom Building	CLS2112 Men	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	184	CLS - Classroom Building	CLS1010 Women	Toilet	7	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	185	CLS - Classroom Building	CLS1010 Women	Faucet	4	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	186	CLS - Classroom Building	CLS1007 Men	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	187	CLS - Classroom Building	CLS1007 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	188	CLS - Classroom Building	CLS1007 Men	Faucet	4	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	189	CLS - Classroom Building	CLS0052 Women	Toilet	6	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	190	CLS - Classroom Building	CLS0052 Women	Toilet	1	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	191	CLS - Classroom Building	CLS0052 Women	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	192	CLS - Classroom Building	CLS0046 Men	Toilet	6	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	193	CLS - Classroom Building	CLS0046 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	194	CLS - Classroom Building	CLS0046 Men	Faucet	6	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	**Project Phase**	**Measure No.**	**Bldg Name**	**Area Location**	**Fixture Type**	**Fixt Qty**	**Pre Code**	**Existing Description**	**Post Code**	**Post Description**
NEIU	DO1	195	PF - Parking Facility	PF131 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	196	PF - Parking Facility	PF131 Men	Faucet	1	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed
NEIU	DO1	197	PF - Parking Facility	PF130 Women	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	198	PF - Parking Facility	PF130 Women	Faucet	1	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed
NEIU	DO1	199	PF - Parking Facility	PF119 Toilet	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	200	PF - Parking Facility	PF119 Toilet	Faucet	1	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed

A	B	C	D	E	F	G	H	I	J	K
Facility Name	**Project Phase**	**Measure No.**	**Bldg Name**	**Area Location**	**Fixture Type**	**Fixt Qty**	**Pre Code**	**Existing Description**	**Post Code**	**Post Description**
NEIU	DO1	201	PF - Parking Facility	PF116 Mens Locker	Toilet	1	TVT4WMRDSEO/SFT-ESA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-ESA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	202	PF - Parking Facility	PF116 Mens Locker	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	203	PF - Parking Facility	PF116 Mens Locker	Faucet	2	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed
NEIU	DO1	204	PF - Parking Facility	PF115 Womens Locker	Toilet	2	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	205	PF - Parking Facility	PF115 Womens Locker	Faucet	2	FA-LF/ULF	Ultra Low Faucet Areator w/ Large Female Thread	N/R	No Retrofit Proposed
NEIU	DO1	206	PF - Parking Facility	PF114 Break Room	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	207	LIB - Library	LIB401A Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	208	LIB - Library	LIB401A Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	209	LIB - Library	LIB403A Men	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	210	LIB - Library	LIB403A Men	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	211	LIB - Library	LIB403A Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	212	LIB - Library	LIB403A Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	213	LIB - Library	LIB301A Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	214	LIB - Library	LIB301A Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	215	LIB - Library	LIB303A Men	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	216	LIB - Library	LIB303A Men	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	217	LIB - Library	LIB303A Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	218	LIB - Library	LIB303A Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	219	LIB - Library	LIB201 Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	220	LIB - Library	LIB201 Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	221	LIB - Library	LIB204 Men	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	222	LIB - Library	LIB204 Men	Urinal	3	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	223	LIB - Library	LIB204 Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	224	LIB - Library	LIB101 Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	225	LIB - Library	LIB101 Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	226	LIB - Library	LIB104 Men	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	227	LIB - Library	LIB104 Men	Urinal	3	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	228	LIB - Library	LIB104 Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	229	LIB - Library	LIB111 Men	Toilet	1	TVT2FMBD12SEO/SF T-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12SEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	230	LIB - Library	LIB111 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	231	LIB - Library	LIB111 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	232	LIB - Library	LIB112 Women	Toilet	1	TVT2FMBD12SEO/SF T-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12SEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	233	LIB - Library	LIB112 Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	234	LIB - Library	LIB002 Women	Toilet	5	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	235	LIB - Library	LIB002 Women	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	236	LIB - Library	LIB003 Men	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	237	LIB - Library	LIB003 Men	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	238	LIB - Library	LIB003 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	239	LIB - Library	LIB003 Men	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	240	SCI - Science Building	SCI004 Men	Toilet	4	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	241	SCI - Science Building	SCI004 Men	n/a	8	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	242	SCI - Science Building	SCI004 Men	Faucet	5	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	243	SCI - Science Building	SCI162 Women	Toilet	13	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	244	SCI - Science Building	SCI162 Women	Faucet	7	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	245	SCI - Science Building	SCI250 Women	Toilet	11	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	246	SCI - Science Building	SCI250 Women	Faucet	7	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	247	SCI - Science Building	SCI248 Men	Toilet	4	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	248	SCI - Science Building	SCI248 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	249	SCI - Science Building	SCI248 Men	Faucet	5	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	250	SCI - Science Building	SCI370 Women	Toilet	12	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	251	SCI - Science Building	SCI370 Women	Faucet	7	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	252	SCI - Science Building	SCI372 Men	Toilet	4	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	253	SCI - Science Building	SCI372 Men	n/a	7	RECHECK	Recheck Fixture	N/R	No Retrofit Proposed
NEIU	DO1	254	SCI - Science Building	SCI372 Men	Faucet	5	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	255	PE - Physical Education Complex	2142 Women	Toilet	4	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	256	PE - Physical Education Complex	2142 Women	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	257	PE - Physical Education Complex	2141 Men	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	258	PE - Physical Education Complex	2141 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	259	PE - Physical Education Complex	2141 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	260	PE - Physical Education Complex	2141 Men	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	261	PE - Physical Education Complex	2128 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	262	PE - Physical Education Complex	2128 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	263	PE - Physical Education Complex	2129 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	264	PE - Physical Education Complex	2129 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	265	PE - Physical Education Complex	1106 Women	Toilet	4	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	266	PE - Physical Education Complex	1106 Women	Faucet	4	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	267	PE - Physical Education Complex	1108 Men	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	268	PE - Physical Education Complex	1108 Men	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	269	PE - Physical Education Complex	1108 Men	Urinal	1	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	270	PE - Physical Education Complex	1108 Men	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	271	PE - Physical Education Complex	1119 Kitchen	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	272	PE - Physical Education Complex	1162 Women	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	273	PE - Physical Education Complex	1162 Women	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	274	PE - Physical Education Complex	1160 Women Shower	Shower	13	SH/SF	Standard Flow Showerhead	N/A	No Retrofit
NEIU	DO1	275	PE - Physical Education Complex	1160 Women Shower	Shower	2	SH-W/SF	Standard Flow Showerhead, Handicapped Wand	N/A	No Retrofit
NEIU	DO1	276	PE - Physical Education Complex	1165 Women Toilet	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	277	PE - Physical Education Complex	1164 Women Toilet	Toilet	3	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	278	PE - Physical Education Complex	1164 Women Toilet	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	279	PE - Physical Education Complex	1168 Women Varsity Shower	Shower	5	SH/SF	Standard Flow Showerhead	N/A	No Retrofit
NEIU	DO1	280	PE - Physical Education Complex	1169 Women Varsity Toilet	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	281	PE - Physical Education Complex	1169 Women Varsity Toilet	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	282	PE - Physical Education Complex	1186 Women Faculty Shower	Shower	2	SH/SF	Standard Flow Showerhead	N/A	No Retrofit

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	283	PE - Physical Education Complex	1179 Women Faculty Locker	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	284	PE - Physical Education Complex	1179 Women Faculty Locker	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	285	PE - Physical Education Complex	1187 Men Faculty Shower	Showe r	2	SH/SF	Standard Flow Showerhead	N/A	No Retrofit
NEIU	DO1	286	PE - Physical Education Complex	1188 Men Faculty Locker	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	287	PE - Physical Education Complex	1188 Men Faculty Locker	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	288	PE - Physical Education Complex	1188 Men Faculty Locker	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	289	PE - Physical Education Complex	1191 Men Varsity Shower	Shower	5	SH/SF	Standard Flow Showerhead	N/A	No Retrofit
NEIU	DO1	290	PE - Physical Education Complex	1190 Men Varsity Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	291	PE - Physical Education Complex	1190 Men Varsity Toilet	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	292	PE - Physical Education Complex	1190 Men Varsity Toilet	Faucet	2	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	293	PE - Physical Education Complex	1195 Men Shower	Shower	13	SH/SF	Standard Flow Showerhead	N/A	No Retrofit
NEIU	DO1	294	PE - Physical Education Complex	1195 Men Shower	Shower	2	SH-W/SF	Standard Flow Showerhead, Handicapped Wand	N/A	No Retrofit

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	295	PE - Physical Education Complex	1193 Men Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	296	PE - Physical Education Complex	1193 Men Toilet	Urinal	1	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	297	PE - Physical Education Complex	1198 Men Toilet	Toilet	2	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	298	PE - Physical Education Complex	1198 Men Toilet	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	299	PE - Physical Education Complex	1198 Men Toilet	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	300	PE - Physical Education Complex	1197 Men Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	301	PE - Physical Education Complex	1197 Men Toilet	Urinal	2	UWMWH-EHA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Hand Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	302	PE - Physical Education Complex	1197 Men Toilet	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	309	CC - Child Care Building	111 Kitchen	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	310	CC - Child Care Building	111 Kitchen	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	311	CC - Child Care Building	113 Classroom	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	312	CC - Child Care Building	114 Toilet	Toilet	1	TVT2FMBD12BEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12BEO1.6-EHA30-1.6	New 1.6 gpf Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	313	CC - Child Care Building	114 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	314	CC - Child Care Building	116 Classroom	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	315	CC - Child Care Building	115 Toilet	Toilet	1	TVT2FMBD12BEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12BEO1.6-EHA30-1.6	New 1.6 gpf Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	316	CC - Child Care Building	115 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	317	CC - Child Care Building	100 Classroom	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	318	CC - Child Care Building	101 Toilet	Toilet	1	TVT2FMBD12BEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12BEO1.6-EHA30-1.6	New 1.6 gpf Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	319	CC - Child Care Building	101 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	320	CC - Child Care Building	103 Classroom	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread
NEIU	DO1	321	CC - Child Care Building	102 Toilet	Toilet	1	TVT2FMBD12BEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12BEO1.6-EHA30-1.6	New 1.6 gpf Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	322	CC - Child Care Building	102 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	323	CC - Child Care Building	107 Classroom	Faucet	1	FAKIT-LM/SF	Standard Flow Kitchen Faucet Areator w/ Large Male Thread	NA-LM1.0	New 1.0 gpm Areator Nozzle w/ Large Male Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	324	CC - Child Care Building	106 Toilet	Toilet	1	TVT2FMBD12BEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT2FMBD12BEO1.6-EHA30-1.6	New 1.6 gpf Flush-Valve Toilet w/ Top Spud - 2 Bolt - Floor Mounted - Bottom Discharge China, 12" Rough-In, Baby Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	325	CC - Child Care Building	106 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	326	CC - Child Care Building	105 Toilet	Toilet	1	TVT4WMRDSEO/SFT-EHA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-EHA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	327	CC - Child Care Building	105 Toilet	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	328	G&M - Grounds & Maintenance	102 Women	Toilet	1	TTG4WMRDSEO/SFT	Standard Flow Gravity Tank Toilet w/ 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat	TTP4WMRDEO1.1	New 1.6 gpf Pressure-Assist Tank High Efficiency Toilet (HET) w/ 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat
NEIU	DO1	329	G&M - Grounds & Maintenance	102 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	330	G&M - Grounds & Maintenance	103 Men	Toilet	1	TTG4WMRDSEO/SFT	Standard Flow Gravity Tank Toilet w/ 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat	TTP4WMRDEO1.1	New 1.6 gpf Pressure-Assist Tank High Efficiency Toilet (HET) w/ 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat
NEIU	DO1	331	G&M - Grounds & Maintenance	103 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

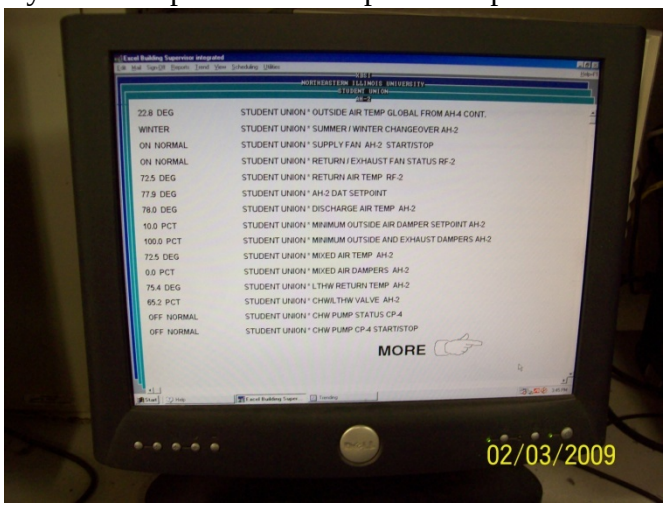
A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	332	J - Building J	J106 Men	Toilet	2	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	333	J - Building J	J106 Men	Urinal	3	UWMWH-ESA9/SF	Standard Flow Flush Urinal w/ Wall Mounted Water Holdup China, Exposed Sensor Actuator, 1 1/2" Diameter VBt, 9" Length	UWM-ESC9-0.125	New "Small Pint" 1/8 gpf (0.125 gallon per flush) Flush-Valve Wall Mounted Urinal w/ large footprint, Exposed Sensor Actuator, 3/4" Dia. VBt, 9" Length
NEIU	DO1	334	J - Building J	J106 Men	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	335	J - Building J	J107 Women	Toilet	5	TVT4WMRDSEO/SFT-ESA30/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Diameter VBt, 30" Length	TVT4WMRDEO1.3-ESA30-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 30" Length
NEIU	DO1	336	J - Building J	J107 Women	Faucet	3	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

A	B	C	D	E	F	G	H	I	J	K
Facility Name	Project Phase	Measure No.	Bldg Name	Area Location	Fixture Type	Fixt Qty	Pre Code	Existing Description	Post Code	Post Description
NEIU	DO1	337	I - Building I	I105 Men	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	338	I - Building I	I105 Men	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread
NEIU	DO1	339	I - Building I	I106 Women	Toilet	1	TVT4WMRDSEO/SFT-EHA9/SF	Standard Flow Flush-Valve Toilet w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Standard Rim Height, Elongated Open Seat, Exposed Hand Actuator, 1-1/2" Diameter VBt, 9" Length	TVT4WMRDEO1.3-EHA9-1.3	New 1.3 gpf Flush-Valve High Efficiency Toilet (HET) w/ Top Spud - 4 Bolt - Wall Mounted - Rear Discharge China, Elongated Open Seat, Exposed Sensor Actuator, 1-1/2" Dia. VBt, 9" Length
NEIU	DO1	340	I - Building I	I106 Women	Faucet	1	FA-LF/SF	Standard Flow Faucet Areator w/ Large Female Thread	NS-LF0.5	New 0.5 gpm Spray Nozzle w/ Large Female Thread

ECM 6 CONTROL SYSTEMS UPGRADE

OVERVIEW

The existing campus Building Automation and Control System is comprised of four different systems which include of a mix of pneumatic/electric and direct digital control (DDC) systems and components. Four different control vendor systems are present on campus. The prevalent vendor is Honeywell. This system is very antiquated, availability of control panel parts is limited and the front end operator command console utilizes an antiquated text display in lieu of a graphical display. The other control vendors include T.A.C. I/NET Seven, Johnson Controls Metasys and Automated Logic. Facility engineers have stressed how the maintenance staff prefers the functionality of the I/NET Seven system and the working relationship with the local vendor.



NORESCO proposes to expand the existing I/NET Seven Building Automation System (BAS) and replace the existing Honeywell, Johnson Controls and Automated Logic system serving associated buildings. This would allow the I/NET Seven system to effectively control and optimize new, refurbished and existing air handling units. Along with new control hardware, control optimization will include a comprehensive review, verification, and optimization of the operation and functionality of key control system components and sequences. These improvements will include:

- Implement updated energy savings strategies and scheduling of HVAC equipment
- Verify and optimize the existing control sequences in the Fine Arts Building.
- Provide operators with updated diagnostic tools and monitoring capabilities.

The improvements will take place in the following Buildings

6.1 C Bldg (Replace the existing Automated Logic System)
6.2 D Bldg (Replace the existing Honeywell System)
6.3 E Bldg (Replace the existing Honeywell System)
6.4 F Bldg (Replace the existing Honeywell System)
6.5 Fine Arts - Retro-commission VAV Boxes currently on the I-NET Seven
6.6 H Bldg (Replace the existing Honeywell System)
6.7 Lech Walesa Hall (classroom) (Replace the existing Honeywell System)
6.8 Library (Replace the existing Honeywell System)
6.9 Parking Garage (Replace the existing Johnson Control System)

6.10 Phys Ed (Replace the existing Honeywell System)
6.11 Science (Replace the existing Honeywell System)
6.12 Student Union (Replace the existing Honeywell System)

Based on discussions with campus engineers and observation of system operation NORESCO is confident that efficiency improvements in management of space temperatures, schedules, ventilation air and system temperatures are possible. The result will be reduced electric, heating, and cooling energy consumption, and an improved capability for the operating and maintenance staff to monitor, control, operate and maintain HVAC and controls systems. The building engineering staff is very proficient in the operation of the I/NET Seven system and we only want to maximize that proficiency, with minimal retraining and lost productivity.

EXISTING SYSTEM DESCRIPTION

The existing campus Building Automation and Control System is comprised of four different systems which include of a mix of pneumatic/electric and direct digital control (DDC) systems and components. Building D, E, F, H, Classroom, Student Union, Library, Science and a portion of the Phys Ed Buildings are controlled from existing **Honeywell** control panels utilizing a Honeywell Tridium front end interface. This existing system is very antiquated, availability of control panel parts is limited and the front end operator command console utilizes an antiquated text display in lieu of a graphical display. Building C is controlled from an existing **Automated Logic** building automation system also utilizing the Honeywell Tridium front end interface. . The Parking Facility is controlled from an existing **Johnson Controls** Metasys building automation system utilizing a graphical front end interface. Building A, B, Fine Arts and one roof top units in the PE Building are controlled from the existing **T.A.C. I/NET Seven** building automation system with graphical interface front end command console. The facility has greatly expressed how their maintenance staff likes the functionality of the I/NET Seven system and the working relationship with the local vendor.

EVALUATED MEASURES

NORESCO proposes to replace the Building Automation System which includes new control panels to control the air handling units and all associated devices presently being monitored and/or controlled by the existing Honeywell Building Automation Systems in buildings D, E, F, H, Classroom, Science, Library, Student Union and Phys Ed. building. NORESCO proposed to completely replacing the existing Automated Logic System in Building C, the existing Johnson Controls System in the Parking Facility and optimize the existing control strategies and retro commission of the VAV boxes in the Fine Arts Building. The new systems shall utilize networked direct digital controls (DDC) to replace selected existing Honeywell controls. The HVAC systems in these buildings shall be efficiently controlled based on occupancy and space load conditions. The new control panels shall be integrated into the facilities existing I/NET Seven Operator's workstation with graphical user interface software. The I/NET Seven system shall communicate from building to building over the facilities existing Ethernet network. (Ethernet network connections shall be provided and installed by the facility.)

Control strategy optimization seeks to ensure the functionality of equipment and systems and to optimize how they operate together in order to improve energy efficiency and improve building performance and comfort. The goal of ensuring comfort and productivity of the building occupants accompanies the goal of cost savings. The process includes investigating current operating procedures, optimizing building energy systems and formalizing efficient operational procedures, as well as measuring and documenting the energy savings and performance improvements.

The benefits of optimization are numerous. Many of those most important to building owners, operators and occupants are summarized below:

- Identifies system operating, control and maintenance problems
- Aids in long-term planning and major maintenance budgeting
- Helps ensure a healthy, comfortable, and productive working environment for occupants
- Reduces energy waste and ensures that energy using equipment operates efficiently
- Provides energy cost savings that payback investment
- Reduces maintenance costs; reduces premature equipment failure
- Enhances and expedites troubleshooting capabilities
- Provides appropriate training to operating staff to increase skill levels; increases staff effectiveness in serving customers or tenants

Scope of Work

NORESCO proposes to replace the existing Honeywell BAS with the newest I/NET Seven building automation system, expand functionality in the Central Plant and Phys Ed Building and optimize the existing I/NET Seven energy management system in the Fine Arts Building

The new control system shall monitor the boilers, monitor and enable the chillers and control and monitor air handling units and VAV box with reheat coils in the following buildings at campus:

In addition, NORESCO proposes to install new fan VFDs and modify systems as follows to achieve optimal control of flows and pressures (refer to VAV Conversion and HVAC Upgrades for proposed HVAC equipment replacement and modifications):

- The two (2) constant volume air handling units and one (1) air handling unit serving fan coil units in building D shall be controlled from new I/NET Seven Direct Digital Control (DDC) system to provide start/stop optimization, setback temperatures and discharge air reset control.

- One (1) new CO2 sensor shall be installed in the Phys Ed racket ball court air handlers integrated into the existing I/NET Seven Direct Digital Control (DDC) system to provide economizer and demand ventilation control.
- NORESCO shall install VFDs on supply and return fans for AHU-2 and 8 in building E, and AHU's 1 through 5 serving the Library building. New static pressure transmitters shall be installed in the supply ducts of the air handlers, located near the furthest zone terminal VAV/reheat box. New controls shall be integrated into the existing I/NET Seven EMS.
- NORESCO shall install VFD's on supply and return fans for AHU-1 through 4 in the Classroom building. The VFD's shall be controlled from the new I-NET Seven Direct Digital Control (DDC) system by reducing the speed of the supply and return fans based on seasonal space temperature.
- Constant volume air handling units in building E, F, H Science and AHU-5 in the Classroom building shall be controlled from new I/NET Seven Direct Digital Control (DDC) system to provide start/stop optimization, setback temperatures and discharge air reset control.
- NORESCO shall install new condenser water pumps and associated VFD's. The speed of the fans shall be modulated to maintain a condenser water set point temperature controlled from the new I-Net Seven Direct Digital Control (DDC) system providing better system performance and significantly improve the savings from variable speed control.

For the new I/NET Seven control systems and the existing systems in Fine Arts a control & application software sequence review shall involve a thorough point-to-point checkout of the existing DDC hardware and software control points and sequences of operation of the associated VAV boxes to ensure that the buildings' controls systems are operating properly and utilizing the most efficient control strategies available. As this system is a proprietary system, reviewing and testing the existing system requires that NORESCO work with Northeastern Illinois University current EMS vendor; Rixon Custom Equipment Co..

The following new or modified control strategies will be implemented throughout the campus:

Optimized Start/Stop – Each building air handler shall be individually controlled to provide the optimum morning warm-up (or cool down) based on outside temperatures, inside zone temperatures, and equipment heating and cooling capacities. During unoccupied hours the software shall track the rate of temperature change and then utilize this data to calculate when equipment shall be started in order to reach the desired indoor temperatures before the first occupants are scheduled to arrive. Similarly, the system shall determine the optimum time to shut down equipment in order to take advantage of the residual heating and cooling capacity in the hydronic loops and coils after equipment is shut off. Upon start-up outside air dampers shall remain closed until the scheduled occupancy time.

Setback Space Temperatures – Currently buildings are set to maintain a constant space temperature whenever equipment is enabled. Considerable amount of energy can be saved by adjusting the heating setpoint downward and the cooling setpoint upward during unoccupied periods. This allows most equipment to stay off completely during unoccupied periods. This shall enable the facilities to achieve considerable savings without affecting occupant comfort.

Variable Air Volume Control Optimization – Air handler supply and return fans in VAV systems shall be controlled to optimize efficiency. Static pressure sensors shall be located for best possible dynamic response, and static pressure setpoints will be reset based on total demand of all controlled zones. . This strategy shall significantly improve the savings from variable speed control.

Economizer Optimization and Demand Ventilation Control – Economizers shall be repaired as required and controlled based on operating mode. For free cooling mode, the economizer shall operate to maintain mixed air setpoint whenever outside air temperature is cooler than return air temperature. During occupied mode, minimum position shall be set according to occupancy requirements, including use of CO_2 sensors to determine ventilation requirements on air handlers of 8000 CFM or more. During unoccupied periods minimum position shall be fully closed, as no ventilation air is required when the area served is unoccupied. And finally, during periods when nights are substantially cooler than days and days require cooling, the space shal be pre-cooled using full economizer during late night hours, to purge accumulated heat and lower the temperature of the building mass.

Demand ventilation control is a strategy for regulating the amount of ventilation air provided to a space based on the actual occupancy level, as determined by CO_2 sensing. Since people generate CO_2 as a bio-effluent, measurement of CO_2 is an effective way to gauge occupancy. During periods of low or no occupancy, the outside air dampers of air handling units can be modulated to a higher return air position, or the fan motors modulated to a lower speed, thereby reducing the amount of outside air that must be heated or cooled. This type of control strategy is applicable to areas of variable occupancy, such as offices, treatment rooms, meeting and activity rooms, and dining facilities. A CO_2 sensor shall typically be installed in the return air duct of the respective air handling unit and CO_2 setpoint shall be determined based on the total air volume and the ventilation requirement in the critical zone (the zone with lowest CFM/person when occupied). Measuring CO_2 in the return-air assures proper dilution of all zones at all air volumes, takes advantage of overall dilution in all zones served, and is responsive to changes in occupancy as people move from one area of the building to another. Discharge Air Temperature Reset – The discharge air supplied by many of the air handling systems is currently maintained at a constant temperature. This is typical of constant- and variable-volume reheat systems, but it is not the most efficient alternative, as it requires a great deal of reheat energy during low-load conditions. Using a control strategy similar to chilled water reset, the temperature of the discharge air shall be reset to match the demands of the warmest zone. This strategy shall reduce the amount of reheat energy required to maintain comfortable space conditions and, therefore, also reduce the amount of cooling energy required.

Optimized Zone Control – With direct control of zone VAV/reheat boxes, more sophisticated control strategies are possible. In Buildings E, , Library and Fine Arts reheat coils shall be controlled not only to satisfy space temperature setpoints, but also to maintain an upper limit on supply air temperature, improving air mixing and comfort, as well as saving energy. Minimum zone air volumes shall be varied based on occupancy, determined by schedule. When unoccupied, damper minimum position can be reduced to zero, further saving on fan energy. Individual zones shall have their own setpoint schedules based on occupancy. Integration with the central EMS controls shall prevent zone temperature setpoint conflicts.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

Impact on Facility Operations and Performance

The facility will benefit from reduced energy consumption, reduced service and maintenance costs, increased operating and maintenance staff productivity, and improved comfort conditions. Operating personnel are already very familiar with operation of I/NET Seven system.

Special Operating Requirements

There are no special operating requirements associated with this measure.

Maintenance

NORESCO expects maintenance of the installed equipment to be comparable to current requirements. Existing pneumatic controls valves on air handling heating and cooling coils, heat exchangers and terminal devices (which are not being replaced under the VAV Conversion) shall remain pneumatic and be reused. Pneumatic damper actuators shall remain and be reused. Any remaining control valve and/or pneumatic actuator and associated dampers shall be maintained by the facility. Any of these devices determined not operational during the commissioning of these devices shall be noted and a written list submitted to the facility for repair and/or replacement.

Customer Training

NORESCO will provide As-built documentation as well as training for the upgraded and revised EMS sequences of operation.

ENVIRONMENTAL ISSUES

The building owner will be responsible for identification and removal of asbestos on air handling equipment, piping and ductwork where new control components need to be installed.

EQUIPMENT INFORMATION

Manufacturer Specification

T.A.C. I/NET Seven

Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

Building "C"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
VAV Unit AHU-1							
Unit Enable	N/A					1	
Supply Fan VFD Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Supply Fan VFD Speed Input					1		
Supply Fan VFD Alarm		1					
Return Fan VFD Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Return Fan VFD Speed Input					1		
Return Fan VFD Alarm		1					
Exhaust Air Dampers	Actuator				1		
Minimum Outside Air Damper	Actuator				1		
Maximum Outside Air Damper	Actuator				1		
Return Air Damper	Actuator				1		
Mixed Air Temperature				1			
Supply Air CFM				1			
Return Air CFM				1			
Minimum Outside Air CFM				1			
Filter Differential		1					Differential Pressure Switch
Cooling Coil Valve	Actuator				1		
Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Discharge Temperature				1			
Heating Coil Pump Start/Stop	Relay		1				
Heating Coil Pump Status	Current Switch	1					
Cooling Coil Pump Start/Stop	Relay		1				
Cooling Coil Pump Status	Current Switch	1					
2/3rd Static Pressure	DP Xmtr			1			Install 2/3 distance in duct run
Return Air Temperature				1			
Supply High Static Safety							Hardwired to VFD safety
Return High Suction Static Safety							Hardwired to VFD safety
Supply Air Smoke Detector		1					
Return Air Smoke Detector		1					
Supply Air Smoke Damper			1				
Return Air Smoke Damper			1				

Building "C"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Hot Water System							
Hot Water Pump1 Start/Stop	Relay		1				
Hot Water Pump1 Status	Current Switch	1					
Hot Water Pump2 Start/Stop	Relay		1				
Hot Water Pump2 Status	Current Switch	1					
Heat Exchanger 1 Flow Switch	Flow Switch	1					
Heat Exchanger 2 Flow Switch	Flow Switch	1					
Heat Exchanger 1 Supply Temperature				1			
Heat Exchanger 1 Return Temperature				1			
Heat Exchanger 2 Supply Temperature				1			
Heat Exchanger 2 Return Temperature				1			
Heat Exchanger 1 High Temp Cutout		1					
Heat Exchanger 2 High Temp Cutout		1					
Hot Water Supply Temperature				1			
Hot Water Return Temperature				1			
Hot Water Differential Pressure				1			
Hot Water Bypass Valve	Actuator				1		
Heat Exchanger 1 Control Valve	Actuator				1		
Heat Exchanger 2 Control Valve	Actuator				1		
Chilled Water Supply Temperature				1			
Chilled Water Return Temperature				1			
Misc Points							
AC-1 Temperature				1			
AC-1 Alarm		1					
Exhaust Fan Start/Stop			1				
Exhaust Fan Status		1					
Exhaust Fan Damper			1				
Exhaust Fan Damper End Switch		1					

Building "D"

Device/Point Name	Device	Point Type					Notes
		DI	DO	AI	AO	SW	
Single Zone Air Handling Units D-1							
Unit Enable	N/A					1	
Supply Fan VFD Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Supply Fan VFD Speed Input					1		
Supply Fan VFD Alarm		1					
Return Fan VFD Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Return Fan VFD Speed Input					1		
Return Fan VFD Alarm		1					
Mixed Air Temperature				1			
Filter Differential	DP SW	1					Differential Pressure Switch
Mixed Air Dampers					1		
Cooling Coil Valve	Actuator				1		
Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Discharge Temperature				1			
Heating Coil Pump Start/Stop	Relay		1				
Heating Coil Pump Status	Current Switch	1					
Zone Space Temperature (For Night Set Back)	Wall Sensor			4			
Return Air Temperature				1			
Duct Static Pressure	Pressure Xmitter			1			Install 2/3 distance down ductwork
Supply High Static Safety							Hardwired to VFD safety
Return High Suction Static Safety							Hardwired to VFD safety
Smoke Detector							Hardwired to VFD safety. Reuse if operational

Building "D"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Single Zone Fan Coil Units D-3 & H1							
Unit Enable	N/A					2	
Supply Fan Start/Stop	Relay		2				
Supply Fan Status	Current Switch	2					
Return Fan Start/Stop	Relay		2				
Return Fan Status	Current Switch	2					
Mixed Air Temperature				2			
Mixed Air Dampers					2		
Filter Differential	DP SW	2					Differential Pressure Switch
Cooling Coil Valve	Actuator				2		
Heating Coil Valve	Actuator				2		
Low Temperature Detector		2					
Discharge Temperature				2			
Return Air Temperature	Temp sensor			2			
Smoke Detector							Hardwired to starter safety.
Heating Coil Pump Start/Stop	Relay		2				
Heating Coil Pump Status	Current Switch	2					
Cooling Coil Pump Start/Stop	Relay		2				
Cooling Coil Pump Status	Current Switch	2					
Zone Space Temperature (For Night Set Back)	Wall Sensor			2			
HW To HW Heat Exchanger D1 & D2							
Circulation Pump Start/Stop	Relay		2				
Circulation Pump Status	Diff. Pressure	2					Differential Pressure Switch
HW Valve	Actuator				2		
Hot Water Supply Temperature	Temp Sensor			2			
Miscellaneous Points							
Sump High Level Alarm		1					
Ejector Pit High Level Alarm		1					

Building "E"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Multi Zone Air Handling Units E-3							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Mixed Air Temperature				1			
Mixed Air Dampers					1		
Filter Differential		1					Differential Pressure Switch
Cold Deck Cooling Coil Valve	Actuator				1		
Hot Deck Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Smoke Detector							
Hot Deck Discharge Temperature				1			
Cold Deck Discharge Temperature				1			
Hot Deck Heating Coil Pump Start/Stop	Relay		1				
Hot Deck Heating Coil Pump Status	Current Switch	1					
Cold Deck Cooling Coil Pump Start/Stop	Relay		1				
Cold Deck Cooling Coil Pump Status	Current Switch	1					
Return Air Temperature				1			
Zone Temperature (3 zones)				3			
Zone Hot/Cold Deck Damper Control (3 zones)					3		
Single Zone Air Handling Units E-5 & 9							
Unit Enable	N/A					2	
Supply Fan Start/Stop	Relay		2				
Supply Fan Status	Current Switch	2					
Return Fan Start/Stop	Relay		2				
Return Fan Status	Current Switch	2					
Mixed Air Temperature				2			
Mixed Air Dampers					2		
Filter Differential	DP SW	2					Differential Pressure Switch
Cooling Coil Valve	Actuator				2		
Heating Coil Valve	Actuator				2		
Low Temperature Detector		2					
Discharge Temperature				2			
Heating Coil Pump Start/Stop	Relay		2				
Heating Coil Pump Status	Current Switch	2					
Cooling Coil Pump Start/Stop	Relay		2				
Cooling Coil Pump Status	Current Switch	2					
Zone Space Temperature (For Night Set Back)	Wall Sensor			2			
Return Air Temperature				2			
Smoke Detector							Hardwired to starter safety.

Building "E"

Device/Point Name	Device	Point Type					Notes
		DI	DO	AI	AO	SW	
CV to VAV Conversion Units E1, 2, 6 & 8 (Note: VFD Speed and Alarm Apply for AHU- 2 & 8 only if New Unit Replacement Is Accepted)							
Unit Enable	N/A					4	
Supply Fan VFD Start/Stop	Relay		4				
Supply Fan Status	Current Switch	4					
Supply Fan VFD Speed Input					4		
Supply Fan VFD Alarm		4					
Return Fan VFD Start/Stop	Relay		4				
Return Fan Status	Current Switch	4					
Return Fan VFD Speed Input					4		
Return Fan VFD Alarm		4					
Mixed Air Dampers	Actuator				4		
Mixed Air Temperature				4			
Filter Differential		4					Differential Pressure Switch
Cooling Coil Valve	Actuator				5		
Heating Coil Valve	Actuator				5		
Low Temperature Detector		4					
Discharge Temperature				4			
Heating Coil Pump Start/Stop	Relay		4				
Heating Coil Pump Status	Current Switch	4					
Cooling Coil Pump Start/Stop	Relay		4				
Cooling Coil Pump Status	Current Switch	4					
2/3rd Static Pressure	DP Xmtr			4			Install 2/3 distance in duct run
Return Air Temperature				4			
Supply High Static Safety							Hardwired to VFD safety
Return High Suction Static Safety							Hardwired to VFD safety
Smoke Detector							Hardwired to VFD safety.

Building "E"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
VAV Boxes With Reheat (Applies only if New Unit Replacement Is Accepted)							
Space Temperature				20			
Discharge Temperature				20			
Air Velocity				20			
Reheat Coil Valve					20		
Damper Actuator					20		
HW To HW Heat Exchanger							
Circulation Pump Start/Stop	Relay		4				
Circulation Pump Status	Diff. Pressure	4					Differential Pressure Switch
HW Valve	Actuator				2		
Hot Water Supply Temperature	Temp Sensor			2			
Miscellaneous Points							
Sump High Level Alarm		2					
Sewage Pit High Level Alarm		1					
Exhaust Fan E-17 (toilet) Start/Stop			1				
Outside Lights Building E On/Off			1				

Building "F"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Multi Zone Air Handling Unit F1							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Mixed Air Temperature				1			
Mixed Air Dampers					1		
Filter Differential		1					Differential Pressure Switch
Cold Deck Cooling Coil Valve	Actuator				1		
Hot Deck Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Hot Deck Discharge Temperature				1			
Cold Deck Discharge Temperature				1			
Hot Deck Heating Coil Pump Start/Stop	Relay		1				
Hot Deck Heating Coil Pump Status	Current Switch	1					
Cold Deck Cooling Coil Pump Start/Stop	Relay		1				
Cold Deck Cooling Coil Pump Status	Current Switch	1					
Return Air Temperature				1			
Zone Temperature (5 zones)				5			
Zone Hot/Cold Deck Damper Control (5 zones)					5		
Smoke Detector							Hardwired to starter safety.
HW To HW Heat Exchanger							
Circulation Pump Start/Stop	Relay		4				
Circulation Pump Status	Diff. Pressure	4					Differential Pressure Switch
HW Valve	Actuator				2		
Hot Water Supply Temperature	Temp Sensor			2			
Miscellaneous Points							
Sump High Level Alarm		1					
Outside Lights Building F On/Off			1				

Building "H" - Central Plant

		Point Type					
Device/Point Name	Device	DI	DO	AI	AO	SW	Notes
Hot Water Heating System							
Common HW Supply Temperature				1			
Common HW Retrun Temperature				1			
Boiler Enable/Disable	Relay		3				
Boiler Alarm	Relay	3					
Heating Hot Water Distribution Pump VFD Start/Stop	Relay		3				
Heating Hot Water Distribution Pump Status	Diff. Pressure	3					Differential Pressure Switch
Heating Hot Water Distribution Pump VFD Speed Input					3		
Heating Hot Water Distribution Pump VFD Alarm		3					
Chilled Water Cooling System							
Common CHW Supply Temperature				1			
Common CHW Retrun Temperature				1			
Common CW Supply Temperature				1			
Common CW Retrun Temperature				1			
Chiller Enable/Disable	Relay		3				
Chiller Alarm	Relay	3					
Chilled Water Distribution PumpStart/Stop	Relay		4				
Chilled Water Distribution Pump Status	Diff. Pressure	4					Differential Pressure Switch
Chilled Water Supply By-Pass Valve					1		
Chilled Water Cooling System							
Condenser Water Pump Start/Stop	Relay		4				
Condenser Water Pump Status	Diff. Pressure	4					Differential Pressure Switch
TowerVFD Start/Stop			2				
Tower VFD Status		2					
Tower VFD Speed Input					2		
Tower VFD Alarm		2					
Condenser Water Supply Temperature (from tower)					1		
Cooling Tower 1 - Supply Valve					1		
Cooling Tower 1 - Return Valve					1		
Cooling Tower 1 - Bypass Valve					1		
Cooling Tower 2 - Supply Valve					1		
Cooling Tower 2 - Return Valve					1		
Cooling Tower 2 - Bypass Valve					1		

Building "H" - Central Plant

		Point Type					
Device/Point Name	Device	DI	DO	AI	AO	SW	Notes
H Building AHU S-1							
Supply Fan Start/Stop			1				
Supply Fan Status		1					
Filter Status		1					
Cooling Solenoid 1			1				
Cooling Solenoid 2			1				
Heating Coil Valve					1		
Discharge Air Temperature				1			
Return Air Temperature				1			
Mixed Air Temperature				1			
Mixed Air Damper Control					1		
Space Temperature				1			
Low Temperature Detector							Wire into safety contact.
Smoke Detector							Wire into safety contact.
H Building AHU HV-1							
Supply Fan Start/Stop			1				
Supply Fan Status		1					
Filter Status		1					
Pump 1 Start/Stop			1				
Pump 1 Status		1					
Pump 2 Start/Stop			1				
Pump 2 Status		1					
Heating Coil Valve					1		
Discharge Air Temperature				1			
Space Temperature				1			
Low Temperature Detector							Wire into safety contact.
Smoke Detector							Wire into safety contact.

Building "Science"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
CV Air Handling Units S-1 through S-5							
Unit Enable	N/A					5	
Supply Fan Start/Stop	Relay		5				
Supply Fan Status	Current Switch	5					
Return Fan Start/Stop	Relay		5				
Return Fan Status	Current Switch	5					
Mixed Air Temperature				4			**NOTE: Unit S2 does not have mixed air temperature.**
Mixed Air Dampers				4			**NOTE: Unit S2 does not have mixed air dampers. 100% outside air unit**
Filter Differential		5					Differential Pressure Switch
Cooling Coil Face & Bypass Damper	Actuator				5		
Heating Coil Valve	Actuator				5		
Low Temperature Detector		5					
Smoke Detector							Hardwired to starter safety.
Discharge Temperature				5			
Heating Coil Pump "A" Start/Stop	Relay		5				
Heating Coil Pump "A" Status	Current Switch	5					
Heating Coil Pump "B" Start/Stop	Relay		5				
Heating Coil Pump "B" Status	Current Switch	5					
Return Air Temperature				5			
Mixed Air Temperature				5			
Space Temperature(s) Unit S1				5			
Space Temperature(s) Unit S2				5			
Space Temperature(s) Unit S3				4			
Space Temperature(s) Unit S4				4			
Space Temperature(s) Unit S5				4			

Building "Science"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
CV Air Handling Unit S-6							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Mixed Air Temperature				1			
Mixed Air Dampers				1			
Filter Differential		1					Differential Pressure Switch
Air Wash Pump Start/Stop			1		1		
Air Wash Pump Status		1					
Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Smoke Detector							Hardwired to starter safety.
Discharge Temperature				1			
Heating Coil Pump "A" Start/Stop	Relay		1				
Heating Coil Pump "A" Status	Current Switch	1					
Heating Coil Pump "B" Start/Stop	Relay		1				
Heating Coil Pump "B" Status	Current Switch	1					
Return Air Temperature				1			
Space Temperature(s) Unit S6				1			
CV Air Handling Unit S-7							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Filter Differential		1					Differential Pressure Switch
Cooling Solenoid Valve			1				
Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Smoke Detector							Hardwired to starter safety.
Discharge Temperature				1			
Heating Coil Pump Start/Stop	Relay		1				
Space Temperature(s) Unit S6				1			

Building "Science"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Heat Exchanger HE-1							
HE-1 High Temp Hot Water Valve					1		
Low Temp Hot Water Valve - Radiation					1		
Low Temp Hot Water Valve - Reheat					1		
Low Temp Hot Water Supply Temperature HE-1				1			
Low Temp Hot Water Supply Temperature Radiation				1			
Low Temp Hot Water Supply Temperature Reheat				1			
How Water Pump 2a Start/Stop			1				
How Water Pump 2a Status		1					
How Water Pump 2b Start/Stop			1				
How Water Pump 2b Status		1					
How Water Pump 2c Start/Stop			1				
How Water Pump 2c Status		1					
How Water Pump 3a Start/Stop			1				
How Water Pump 3a Status		1					
How Water Pump 3b Start/Stop			1				
How Water Pump 3b Status		1					
How Water Pump 3c Start/Stop			1				
How Water Pump 3c Status		1					
Chilled Water Pumps							
Chilled Water Pump P1a Start/Stop			1				
Chilled Water Pump P1a Status		1					
Chilled Water Pump P1b Start/Stop			1				
Chilled Water Pump P1b Status		1					
Miscellaneous Points							
Domestic Water Low Pressure Alarm		1					
Control Air Low Pressure Alarm		1					
Sump High Level Alarm		1					
Outside Lights Science Building On/Off			1				

Building "Library"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
All AHU's HW Distribution Pumps							
Heating Hot Water Distribution Pump VFD Start/Stop	Relay		3				
Heating Hot Water Distribution Pump Status	Diff. Pressure	3					Differential Pressure Switch
Heating Hot Water Distribution Pump VFD Speed Input					3		
Heating Hot Water Distribution Pump VFD Alarm		3					
CV to VAV Conversion All AHU's (Note: VFD Speed, Alarm and Associated Safeties Apply only if VAV Conversion is Accepted)							
Air Handling Units S-1 through S-5							
Unit Enable	N/A					5	
Supply Fan VFD Start/Stop	Relay		5				
Supply Fan Status	Current Switch	5					
Supply Fan VFD Speed Input					5		
Supply Fan VFD Alarm		5					
Return Fan VFD Start/Stop	Relay		5				
Return Fan Status	Current Switch	5					
Return Fan VFD Speed Input					5		
Return Fan VFD Alarm		5					
Mixed Air Temperature				5			
Mixed Air Dampers					5		
Filter Differential		5					Differential Pressure Switch
Cooling Coil Valve	Actuator				5		
Heating Coil Valve	Actuator				5		
Low Temperature Detector		5					
Smoke Detector							Hardwired to VFD safety.
Discharge Temperature				5			
2/3rd Static Prassure	DP Xmtr			5			
Heating Coil Pump Start/Stop	Relay		5				
Heating Coil Pump Status	Current Switch	5					
Cooling Coil Pump Start/Stop	Relay		5				
Cooling Coil Pump Status	Current Switch	5					

Building "Library"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Return Air Temperature				5			
Supply High Static Safety							Hardwired to VFD safety
Return High Suction Static Safety							Hardwired to VFD safety
Miscellaneous Points							
Sump High Level Alarm (1)		1					
Sump High Level Alarm (2)		1					
Outside Lights Science Building On/Off			1				
VAV Boxes With Reheat (Note: Only if VAV Conversion is Accepted)							
Space Temperature				64			
Discharge Temperature				64			
Air Velocity				64			
Reheat Coil Valve					64		
Damper Actuator					64		

Building "Student Union"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
I-Net DDC on Existing VAV AHU's							
Air Handling Units AH-1 through AH-3							
Unit Enable	N/A					3	
Supply Fan VFD Start/Stop	Relay		3				
Supply Fan Status	Current Switch	3					
Supply Fan VFD Speed Input					3		
Supply Fan VFD Alarm		3					
Return Fan VFD Start/Stop	Relay		3				
Return Fan Status	Current Switch	3					
Return Fan VFD Speed Input					3		
Return Fan VFD Alarm		3					
Mixed Air Temperature				3			
Filter Differential		3					Differential Pressure Switch
Cooling Coil Valve	Actuator				3		
Heating Coil Valve	Actuator				3		
Low Temperature Detector		3					
Discharge Temperature				3			
2/3rd Static Prassure	DP Xmtr			3			
Heating Coil Pump Start/Stop	Relay		3				
Heating Coil Pump Status	Current Switch	3					
Cooling Coil Pump Start/Stop	Relay		3				
Cooling Coil Pump Status	Current Switch	3					
Return Air Temperature				3			
Supply High Static Safety							Hardwired to VFD safety
Return High Suction Static Safety							Hardwired to VFD safety
Mixed Air Dampers					3		
Minimum Outside Air Dampers					3		
Smoke Detector							Hardwired to VFD safety.

Building "Student Union"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Constant Volume AHU AH-4							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Mixed Air Temperature				1			
Mixed Air Dampers					1		
Minimum Outside Air Dampers					1		
Filter Differential		1					Differential Pressure Switch
Cold Deck Cooling Coil Valve	Actuator				1		
Hot Deck Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Hot Deck Discharge Temperature				1			
Cold Deck Discharge Temperature				1			
Hot Deck Heating Coil Pump Start/Stop	Relay		1				
Hot Deck Heating Coil Pump Status	Current Switch	1					
Cold Deck Cooling Coil Pump Start/Stop	Relay		1				
Cold Deck Cooling Coil Pump Status	Current Switch	1					
Return Air Temperature				1			
Zone Temperature (2 zones)				2			
Zone Hot/Cold Deck Damper Control (2 zones)					2		
Smoke Detector							Hardwired to starter safety.
Kitchen AHU AH-5							
Supply Fan Status	Current Switch	1					
Filter Differential		1					Differential Pressure Switch
Cooling Coil Valve	Actuator				1		
Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Discharge Temperature				1			
Heating Coil Pump Start/Stop	Relay		1				
Space Temperature				1			
Zone Damper Control	Actuator		2				
Heat Exchangers CV-1, CV-2, CV-3							
Circulation Pump Start/Stop	Relay		5				
Circulation Pump Status	Diff. Pressure	5					Differential Pressure Switch
HW Valve	Actuator				4		
Hot Water Supply Temperature	Temp Sensor			4			

Building "Student Union"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Miscellaneous Points							
Domestic Water Low Pressure Alarm		1					
Control Air Low Pressure Alarm		1					
Sump High Level Alarm		1					
Outside Lights Student Union Building On/Off			1				
VAV Boxes to Remain Controlled as Existing							

Building "Classroom"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
CV to VAV Conversion All AHU's							
Air Handling Units VS-1 through VS-4 (Note: VFD Speed, Alarm and Associated Safeties Apply only VFD Measure Is Accepted)							
Unit Enable	N/A					4	
Supply Fan VFD Start/Stop	Relay		4				
Supply Fan Status	Current Switch	4					
Supply Fan VFD Speed Input					4		
Supply Fan VFD Alarm		4					
Return Fan VFD Start/Stop	Relay		4				
Return Fan Status	Current Switch	4					
Return Fan VFD Speed Input					4		
Return Fan VFD Alarm		4					
Mixed Air Temperature				4			
Mixed Air Dampers					4		
Filter Differential		4					Differential Pressure Switch
Cooling Coil Valve	Actuator				4		
Heating Coil Valve	Actuator				4		
Low Temperature Detector		4					
Smoke Detector							Hardwired to VFD safety.
2/3rd Static Pressure	DP Xmtr			4			
Discharge Temperature				4			
Heating Coil Pump Start/Stop	Relay		4				
Heating Coil Pump Status	Current Switch	4					
Cooling Coil Pump Start/Stop	Relay		4				
Cooling Coil Pump Status	Current Switch	4					
Return Air Temperature				4			
Supply High Static Safety							Hardwired to VFD safety
Return High Suction Static Safety							Hardwired to VFD safety
VAV Boxes With Reheat (Note: Only if VAV Conversion Is Accepted)							
Space Temperature				81			
Discharge Temperature				81			
Air Velocity				81			
Reheat Coil Valve					81		
Damper Actuator					81		

Building "Classroom"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Air Handling Units VS-6							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Mixed Air Temperature				1			
Mixed Air Dampers					1		
Filter Differential	DP SW	1					Differential Pressure Switch
Cooling Coil Valve	Actuator				1		
Heating Coil Valve	Actuator				1		
Low Temperature Detector							
Discharge Temperature				1			
Heating Coil Pump Start/Stop	Relay		1				
Heating Coil Pump Status	Current Switch	1					
Cooling Coil Pump Start/Stop	Relay		1				
Cooling Coil Pump Status	Current Switch	1					
Zone Space Temperature (For Night Set Back)	Wall Sensor			1			
Smoke Detector							Hardwired to starter safety.
Steam To HW Heat Exchanger							
Circulation Pump Start/Stop	Relay		2				
Circulation Pump Status	Diff. Pressure	2					Differential Pressure Switch
HW Valve	Actuator				1		
Hot Water Supply Temperature	Temp Sensor			1			
Domestic HW Heat Exchanger							
Circulation Pump Start/Stop	Relay		2				
Circulation Pump Status	Diff. Pressure	2					Differential Pressure Switch
Circulation Pump VFD Speed							
Circulation Pump VFD Alarm							
HW Valve	Actuator				1		
Hot Water Supply Temperature	Temp Sensor			1			
Miscellaneous Points							
Control Air Low Pressure Alarm		1					
Sump High Level Alarm		1					
Outside Lights Classroom Building On/Off			1				

Parking Facility

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
AHU 1							
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Sw	1					
Supply Fan Speed					1		
Supply Fan VFD Alarm							
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Sw	1					
Return Fan Speed					1		
Return Fan VFD Alarm							
Return air temp				1			
Discharge air temp				1			
Mixed air temp				1			
Mixed air damper	Actuator				1		
Heating Coil Valve	Actuator				1		
Duct Static Pressure	SP transmiiter			1			
Filter Alarm		1					
Low Temperature Detector		1					
Supply Smoke Detector		1					
Return Smoke Detector		1					
Heat Exchanger							
Zone Temperature	Relay			1			
Hot Water Supply Temperature 1	Current Sw			1			
Hot Water Supply Temperature 2	Relay			1			
Hot Water Return Temperature 1	Current Sw			1			
Hot Water Return Temperature 2	Relay			1			
Hot Water Supply Temperature	Current Sw			1			
HW Pump 1 Start/Stop	Relay		1				
HW Pump 2 Start/Stop	Current Sw		1				
HX 1 Valve					1		
HX 2 Valve					1		
VAV Boxes							
Space Temperature				16			
Discharge Temperature				16			
Air Velocity				16			
Reheat Coil Valve					16		
Damper Actuator					16		

PE Building

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
AHU S-1							
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Sw	1					
Supply Fan Speed					1		
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Sw	1					
Return Fan Speed					1		
Hot Water Pump Start/Stop	Relay		1				
Hot Water Pump Status	Current Sw	1					
Reheat Pump Start/Stop	Relay		1				
Reheat Pump Status	Current Sw	1					
Return air temp				1			
Discharge air temp				1			
Mixed air temp				1			
Mixed air damper	Actuator				1		
Heating Coil Valve	Actuator				1		
Reheat Coil Valve	Actuator				1		
LthwSupply Temperature				1			
Minimum OA Damper	Actuator				1		
Duct Static Pressure	SP transmiiter			1			
CFM Supply Duct 1				1			
CFM Supply Duct 2				1			
CFM Supply Duct 3				1			
CFM Supply Duct 4				1			
CFM Return Duct 1				1			
CFM Return Duct 2				1			
Cooling Stage 1			1				
Cooling Stage 2			1				
Cooling Stage 3			1				
Cooling Stage 4			1				
Cooling Stage 5			1				
Filter Alarm		1					
Low Temperature Detector		1					
Smoke Detector		1					
Fire Alarm Shutdown		1					
Space Temperature(s)				4			

PE Building

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
AHU S-2, 3, 4, 5, 6, 8							
Supply Fan Start/Stop	Relay		6				
Supply Fan Status	Current Sw	6					
Return Fan Start/Stop	Relay		6				
Return Fan Status	Current Sw	6					
Hot Water Pump Start/Stop	Relay		6				
Hot Water Pump Status	Current Sw	6					
Reheat Pump Start/Stop	Relay		4				UNITS S3, S4, S6, S8 ONLY
Reheat Pump Status	Current Sw	4					UNITS S3, S4, S6, S8 ONLY
Return air temp				6			
Discharge air temp				6			
Mixed air temp				6			
Mixed air damper	Actuator				6		
Heating Coil Valve	Actuator				6		
Cooling Stage 1			2				UNITS S2, S8 ONLY
Cooling Stage 2			1				UNIT S8 ONLY
Low Temperature Detector		6					
Smoke Detector		6					
Fire Alarm Shutdown		6					
Space Temperature(s) S2, 3, 4, 5, 6				5			
Space Temperature(s) S8				2			
Exhaust Fans EF8, 10, 14, 15, 16, 17							
Fan Start/Stop	Relay		6				
Fan Status	Current Sw	6					
Boilers							
Hot Water Supply Temperature				1			
Hot Water Return Temperature				1			
Miscellaneous Points							
Sump High Level Alarm		1					
Pool Area Sump High Level		1					
House Water Low Pressure		1					
Control Air Low Pressure		1					

Building "CCIS"

Device/Point Name	Device	Point Type					Notes
		DI	DO	AI	AO	SW	
Multi-zone Units AHU S-1, 2 and 4							
Unit Enable	N/A					1	
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Mixed Air Temperature				1			
Mixed Air Dampers					1		
Filter Differential		1					Differential Pressure Switch
Hot Deck Heating Coil Valve	Actuator				1		
Low Temperature Detector		1					
Hot Deck Discharge Temperature				1			
Cold Deck Discharge Temperature				1			
Hot Deck Heating Coil Pump Start/Stop	Relay		1				
Hot Deck Heating Coil Pump Status	Current Switch	1					
Return Air Temperature				1			
Smoke Detector							Hardwired to starter safety.
Zone Temperatures AHU S-1 (5 zones)				5			
Zone Hot/Cold Deck Damper Control AHU S-1 (5 zones)					5		
Zone Temperatures AHU S-2 (4 zones)				4			
Zone Hot/Cold Deck Damper Control AHU S-2 (4 zones)					4		
Zone Temperatures AHU S-4 (9 zones)				9			
Zone Hot/Cold Deck Damper Control AHU S-4 (9 zones)					9		

Building "CCIS"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Single Zone Unit AHU S-3							
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Return Fan Start/Stop	Relay		1				
Return Fan Status	Current Switch	1					
Heating Coil Valve	Actuator				1		
Mixed Air Dampers					1		
Cooling Coil Valve	Actuator				1		
Discharge Air Temperature				1			
Return Air Temperature				1			
Mixed Air Temperature				1			
Low Temperature Detector		1					
Space Temperature				1			
Heating Coil Pump Start/Stop	Relay		1				
Heating Coil Pump Status	Current Switch	1					
Return Smoke Detector							Hardwired to starter safety.
Supply Smoke Detector							Hardwired to starter safety.
Boiler Make Up Air Unit							
Supply Fan Start/Stop	Relay		1				
Supply Fan Status	Current Switch	1					
Face & Bypass Dampers	Acuator				1		
Discharge Air Temperature				1			
Outside Air Damper	Actuator		1				
Low Temperature Detector		1					
Boilers							
Boiler 1 Start/Stop		1					
Boiler 1 Status		1					
Boiler 1 Alarm		1					
Boiler 2 Start/Stop			1				
Boiler 2 Status		1					
Boiler 2 Alarm		1					
Primary Pump 1 Start/Stop			1				
Primary Pump 1 Status		1					
3 way Secondary Valve					1		
Secondary Pump 1 Start/Stop			1				
Secondary Pump 1 Status		1					
Primary Supply Temperature				1			
Secondary Supply Temperature				1			
Secondary Return Temperature				1			

Building "CCIS"

Device/Point Name	Device	Point Type DI	DO	AI	AO	SW	Notes
Draft Induced Fan System							
Fan Start/Stop			1				
Fan Status		1					
Chillers							
Chiller Start/Stop			1				
Chiller Status		1					
Chiller Alarm		1					
Tower 1 Start/Stop			1				
Tower 1 Status		1					
Tower 1 Speed					1		
Tower 2 Start/Stop			1				
Tower 2 Status		1					
Tower 2 Speed					1		
Condensor Pump Start/Stop			1				
Condensor Pump Status		1					
Condensor Supply Temperature				1			
Condensor Return Temperature				1			
Chilled Water Supply Temperature				1			
Chilled Water Return Temperature				1			
Chilled Water Pump Start/Stop			1				
Chilled Water Pump Status		1					

ECM 7 HVAC SYSTEM EFFICIENCY IMPROVEMENTS

OVERVIEW

NORESCO evaluated several energy efficiency improvements to existing Heating, Ventilating and Air Conditioning systems throughout the campus. Below is an overview of the evaluated measures.

7.1 D1 unit Convert CHW Coil to 2 Pipe & VFD's on SF and RF

NORESCO will convert the existing chilled water coil to a two pipe system. This will allow use of the coil to supplement the heating available through the reheat coils located in the ductwork during the heating season. This will allow scheduling and night setback resulting in significant energy savings.

New variable frequency drives (VFDs) will be installed on the supply and return in the D1 unit of Building D fan motors which will modulate the fans' speed based on static pressure in the duct system. This is a more energy efficient method than the existing vortex dampers.

The existing unused chilled water pump will be removed and the heat exchanger control valve will also be replaced as part of this ECM.

7.2- 7.4 Constant Volume with Terminal Reheat to VAV conversion

Constant volume terminal reheat systems supply conditioned air to the interior spaces of Library, Lech Walesa Hall and Science Buildings. The following ECM's were evaluated for the Constant Volume systems.

7.2 VAV Conversion-Library

NORESCO evaluated converting five of the constant volume systems to variable volume operation which will reduce energy consumption and improve occupant comfort. Variable air volume (VAV) slide in boxes will be installed in the duct work and VFDs will be installed in the supply and return fan motors.

NORESCO also evaluated installing VFDs on the supply and return fans of the air handling units without installing VAV boxes in the space. This would allow limited variable flow based on space temperatures at reduced capital expense.

7.3 VAV Conversion-Lech Walesa Hall

NORESCO evaluated converting four of the constant volume systems to variable volume operation which will reduce energy consumption and improve occupant comfort. A variable air volume (VAV) slide in boxes will be installed in the duct work and VFDs will be installed in the supply and return fan motors. However, this does not appear to be the most viable solution for this building since there are many small reheat coils located in close proximity to the room diffusers. The cost to move and replace the diffusers along with the need to clean the reheat coils makes this an economically unattractive ECM.

However, NORESCO also evaluated installing VFDs on the supply and return fans of the air handling units without installing VAV boxes in the space. This would allow limited variable flow based on space temperatures at reduced capital expense

7.4 VAV Conversion-Science

NORESCO evaluated conversion of five of the constant volume systems to variable volume operation which will reduce energy consumption and improve occupant comfort. A variable air volume (VAV) slide in boxes will be installed in the duct work and VFDs will be installed in the supply and return fan motors. During the detailed investment grade audit it was determined that there are laboratories with fume hoods served by these air handling units. NORESCO does not recommend conversion to variable volume for this application. Pressure differential between laboratories and hallways are critical and could be affected by a variable volume system.

7.5 Pool Pump VFD

The swimming pool pumping system in the Physical Education building is equipped with a motor-driven pool pump that operates at constant speed. Currently, a control valve located upstream of the pump is in partially closed position and throttles the water flow.

We evaluated converting the existing constant volume pool pumping system to variable volume operation which will allow the control valve to open. The addition of a variable frequency drive. This measure can offer substantial energy savings, while also resulting in extended motor life

7.6 Kitchen Hood Controls

The kitchen ventilation hoods at the Northeastern Illinois University Student Union currently operate at 100% capacity all day, even during periods in which no cooking is taking place. This results in excessive consumption of fan, heating, and cooling energy during these non-cooking periods.

NORESCO proposes to install equipment and controls to convert the kitchen hood supply and exhaust systems in the Student Union from constant volume to variable volume operation. This will allow the kitchen hood supply and exhaust air flow rates to modulate based on the level of cooking activity taking place in the kitchen. This will result in reduced fan, heating, and cooling energy consumption because the air flow rates will be significantly reduced during periods in which little or no cooking is taking place.

7.7 Kitchen AC Once Through Cooling

Noresco looked at converting the once through water cooled refrigeration units for the kitchen freezer and two walk in coolers to a closed glycol system with a dry cooler. The economics were not attractive and this energy conservation measure (ECM) was dropped.

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DETAILED DESCRIPTION

7.1 D1 Unit HW Coil and VFD

Existing System

The existing Building D air handling unit D-1, located in the basement mechanical area, was originally a dual duct system with a hot water coil The AHU was converted to a variable air volume system with terminal units and reheats. The supply fan has a 60 HP motor. The air flow was measured at 60,100 CFM with the guide vane open approximately 50% position during the audit. The terminal units supplied by the AHU were changed and reheats were added. Problems occurred and it was determined that the fan could not compensate for the increase in static pressure introduced by the terminal units and reheat coils. The hot water coil was cut out to reduce static pressure in the system. The system now operates 24/7 during the winter months because the building cannot recover when scheduled off at night.

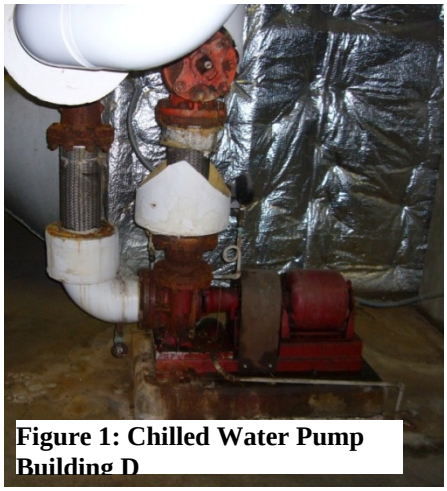


Figure 1: Chilled Water Pump Building D

Figure 2: HTHW to LTHW HX Control Valve

The AHU has vortex dampers on the supply and return fans with pneumatic control based on duct static pressure. The existing building D chilled water pump is not used. The central plant chilled water pumps have to push water through this pump to supply building D. This creates a pressure loss and hence and higher energy use. The building D high temperature hot water (HTHW) to low temperature hot water (LTHW) heat exchanger located in the same mechanical area and serving building D HVAC equipment has a control valve that needs to be replaced.

Evaluated Measure

NORESCO proposes to convert the existing chilled water coil on Building D air handling unit D-1 to a two-pipe system. The coil will be supplied with chilled water from the central plant during the cooling season and hot water from the central plant during the heating season. New hot water and cold water isolation and control valves will be installed. The system will be changed over manually by facility personnel.

The existing building D chilled water pump will be removed and bypassed under this measure. This will reduce the central plant chilled water pump load.

A new control valve and isolation valve will be installed for the high temperature hot water (HTHW) to low temperature hot water (LTHW) heat exchanger located in the same mechanical area and serving building D HVAC equipment.
The existing vortex dampers will be removed and new high efficiency motors and VFDs on the supply, and return fan to control system static pressure. This is a more efficient way to control air flow through the centrifugal fans.
The changes to the air handler and hydronic systems will allow night setback and morning recovery resulting in reduced operating costs and energy use.

Scope of Work

- Install four (4) high performance butterfly isolation valves for the LTHW and chilled water supply and return lines serving the D-1 air handling unit. The valves will be located just before the existing air handling unit HW coil header.
- Install pipe, pipe connections, mounting hardware and insulation required to complete the conversion.
- Install one (1) variable frequency drive and replace one (1) existing 60 HP supply fan motor with inverter rated, premium efficiency motor on Building D AHU D-1.
- Install one (1) variable frequency drive and replace one (1) existing 15 HP return fan motor with inverter rated, premium efficiency motor on Building D AHU D-1.
- Provide VFDs with automatic bypass.
- Provide new belts and sheaves.
- Commission equipment and portions of the control system included in the scope of work.
- Demolish and remove the existing chilled water pump including electrical service and motor and reconnect the piping with a bypass.
- Provide and install a new HTHW isolation valves and control valve for the HTHW to LTHW heat exchanger that serves building D HVAC equipment..

7.2-7.4 Constant Volume with Terminal Reheat to VAV conversion

Existing System

Heating and cooling are provided from constant volume air-handling units with terminal reheat units in the Library, Lech Walesa Hall and Science Building. A constant flow of mixed air is conditioned at the air handling unit to a temperature of about 55°F, and this air is then reheated as necessary to maintain the desired space temperature in each zone using the terminal reheat boxes. This is an inefficient way of operating the equipment because it involves delivering more air to the conditioned spaces than needed, and because it uses simultaneous heating and cooling for temperature and humidity control. In addition, poor control over the systems can result in overcooling the occupied spaces in summer and overheating them in winter, resulting in even more energy consumption as well as discomfort to the occupants.

A summary of the existing air handling units and terminal reheats is included below.

Table 1: Constant Volume Air Handlers Considered for Conversion to VAV

Building	Unit Fans	Motor HP
Library	S-1	40
	E-1	15
	S-2	40
	E-2	15
	S-3	30
	E-3	15
	S-4	15
	E-4	7.5
	S-5	20
	E-5	10
Science	S-1	50
	S-2	30
	S-3	20
	S-4	40
	S-5	25
Classroom	VS-1	25
	VE-1	15
	VS-2	25
	VE-2	15
	VS-3	30
	VE-3	15
	VS-4	30
	VE-4	15

Table 2: Existing Terminal Reheats

Building	AHUs	Number of Reheats
Library	S-1 thru 5	81
Classroom	VS-1 thru 4	189
Science	S-1 thru 5	105
Total	-	375

Evaluated Measures

NORESCO proposes to convert the constant volume with terminal reheat air handling units to variable air volume (VAV) operation by installing VFDs on the supply and return fans and by installing dampers in the existing reheat coil boxes associated with these units. We will install new control components and implement control system programming for the modified air handling equipment to control the AHU fans and reheat box dampers to match airflow rates to the heating and cooling loads in each zone. The proposed conversion from constant volume to VAV

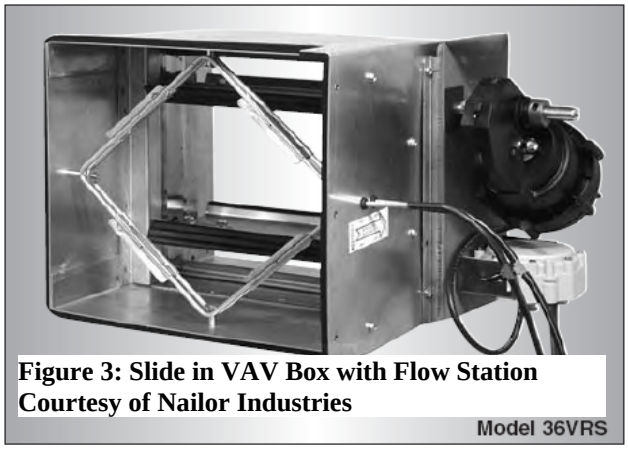


Figure 3: Slide in VAV Box with Flow Station Courtesy of Nailor Industries

operation will allow the output of the air handling system to be modulated based on load, which will noticeably improve occupant comfort while generating significant energy and cost savings.

NORESCO also evaluated installing VFDs on air handling unit fans without installing VAV boxes in the ductwork for both the Library and Lech Walesa Hall. This will allow limited modulation of the fans based on space temperatures. This is the recommended ECM for Lech Walesa Hall.

Scope of Work

- Install new slide in VAV boxes in selected duct sections serving zones. Quantities as listed in the table below.

Table 3: VAV Boxes

Building	AHUs	Number of VAV boxes
Library	S-1 thru 5	64
Classroom	VS-1 thru 4	81
Total	-	145

- Install new two-way control valves, and controls in the existing reheat coil locations associated with the AHU listed below.

Table 4: Existing Terminal Reheats

Building	AHUs	Number of Reheats
Library	S-1 thru 5	81
Classroom	VS-1 thru 4	189
Total	-	270

- Install new VFDs with bypass starters for the AHUs shown below, replace existing supply fan, and return fan motors with inverter rated premium efficiency motors.

Table 5: List of AHU fans for VFDs

Building	Fan Unit	Motor HP
Library	S-1	40
	E-1	15
	S-2	40
	E-2	15
	S-3	30
	E-3	15
	S-4	15
	E-4	7.5
	S-5	20
	E-5	10
Classroom	VS-1	25
	VE-1	15
	VS-2	25
	VE-2	15
	VS-3	30

Building	Fan Unit	Motor HP
Classroom	VE-3	15
	VS-4	30
	VE-4	15

- Provide VFD's with automatic by-pass.
- Provide communication interface for I Net controls.
- Install new VAV compatible diffusers and ceiling tiles in areas affected by diffuser removal and installation for areas converted to VAV in Lech Walesa Hall and in the Classroom Building.
- Provide new VAV compatible diffusers for areas converted to VAV in the Library and E building.
- Provide startup of the new equipment.
- Install new diffusers and repair ceiling support grid in affected areas and install new ceiling tiles where required.

Alternate Scope of Work VFDs ONLY

Provide and install VFDson the fans listed in Table 5 above. No VAV boxes will be added. The drives will be modulated to a minimum speed of 75% (adj.) based on space temperature.

- Provide VFD's with automatic by-pass.
- Provide a communication interface for I Net controls.
- Install new VAV compatible diffusers and ceiling tiles in areas affected by diffuser removal and installation for areas converted to VAV in Lech Walesa Hall and in the Classroom Building.
- Provide new VAV compatible diffusers for areas converted to VAV in the Library and E building.
- Provide startup of the new equipment.
- Install new diffusers and repair ceiling support grid in affected areas and install new ceiling tiles where required.

7.5 Pool Pump VFD

Existing Systems

Two gas-fired boilers at the Physical Education building are used to provide heating hot water to air handling units as well as hot water to heat the water for the swimming

pool. A constant volume pool water pump, rated at 40 HP, continuously circulates the pool water through a heat exchanger and then through a filter to remove any debris. When the pool water temperature is close to its set point, filtered water bypasses the heat exchanger and is returned to the pool. During our site visit, NORESCO's engineers noticed that a control valve, located upstream of the pool pump, is in partially closed position in order to provide proper flow rate through the pool system. Under these conditions, an additional pressure is induced to the pumping system, causing the pump to ride the pump curve. This results in decreased pump efficiency and increased energy consumption

Evaluated Measures

An improvement to the pool pumping system that NORESCO evaluated during the IGA was to convert the existing constant volume pool pump to variable volume operation by installing a VFD on the existing pool pump motor. Implementing this improvement will allow to slow down the pump and deliver proper amount of hot water to the pool without throttling the control valve. Reducing the flow rate in the pumping system by means of a VFD will result in significant amount of energy savings since the pump operates throughout the entire year. Another benefit of installing a VFD will be an extended pump motor life.

The following is the scope of work related to the pool pumping system improvements:

- Provide and nstall one (1) variable frequency drive with a NEMA 4x enclosure and replace one (one) existing 40 HP pool pump motor with inverter rated, premium efficiency motor in the Physical Education Facility.
- Align new pump motor with existing pump shaft.
- Install an enclosure to protect the drive from chlorine vapors.
- Commission all equipment and portions of the control system included in the subcontractor's work.

7.6 Kitchen Hood Controls

Existing System Description

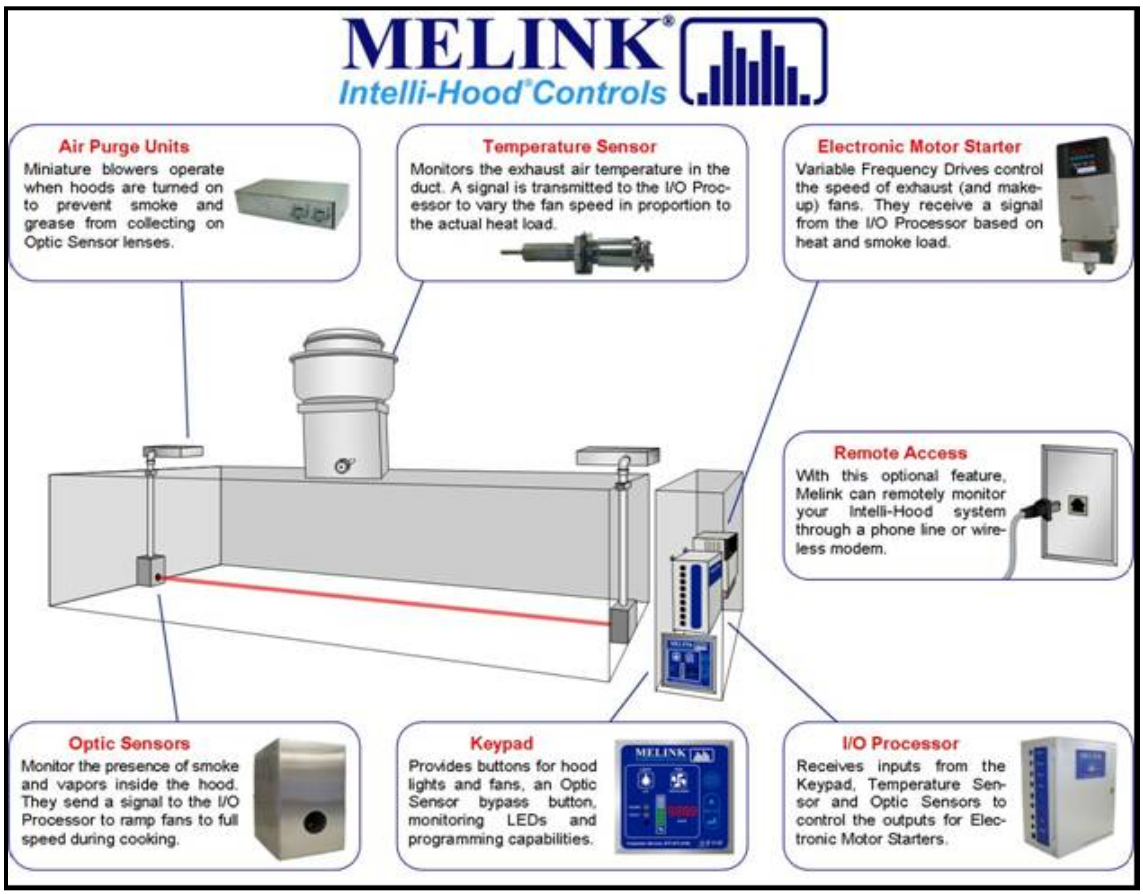
The air distribution system for the Student Union kitchen consists of one 15 hp supply fan and two exhaust fans, one with a 5 hp motor and one with a 3 hp motor. This is a constant volume system with a design exhaust flow rate is 15,000 cfm. The system operates approximately 14 hours per day, 7 days per week. Often, the full exhaust flow rate is not needed when little or no activity is taking place under the hood. Exhausting the design amount of conditioned air during periods of part load operation results in unnecessary fan and thermal energy consumption.

Evaluated Measures

NORESCO will convert the Student Union kitchen supply and exhaust air system to variable volume operation by installing VFDs on the fans and installing sensors on the kitchen hood. These new control components will automatically control the speed of the fans to ensure optimal hood performance.

This system senses both the temperature of the air and the density of smoke entering the hood to determine the optimal fan speed. When the system senses increasing exhaust air temperature, the fan speed is increased proportionately to exhaust the heat properly. Upon the detection of smoke inside the hood, the fans ramp up to 100% speed to ensure proper capture of cooking effluent (and compliance with applicable codes). When the air temperature is low and there is no smoke, indicating little or no cooking activity, the fan speed is reduced to a preset minimum value. Regulating the volume of exhaust air streams to match the cooking loads under the hoods will result in a reduction in the amount of air circulated, which results in heating and cooling savings as well as fan energy savings.

The following diagram provides an overview of the proposed kitchen hood controls.



Scope of Work

NORESCO will install kitchen hood controls and variable frequency drives to modulate the speed of the exhaust and make-up air fans serving the Student Union Kitchen. As part of the kitchen hood controls package, the following equipment will be installed:

- Premium efficiency, inverter duty rated motors for (1) 3 hp exhaust fan, (1) 5 hp exhaust fan, and (1) 15 hp supply fan
- Variable frequency drives with bypasses for (1) 3 hp exhaust fan, (1) 5 hp exhaust fan, and (1) 15 hp supply fan
- The I/O processor will be installed above the hood closest to the keypad with 120/1 or 240/1 VAC input from the hood light circuit.
- I/O Processor
- Keypad
- Temperature Sensors
- Optic Sensor

7.7 Kitchen AC Once Through Cooling

The existing refrigeration compressors for the freezer and two walk in coolers are cooled with city water
The water is discharged the drain. Approximately one GPM flows from the freezer and one GPM from the two coolers.

On initial investigation this measure was measure was not economically viable and we did not pursue this further
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EQUIPMENT INFORMATION

7.1 D1 unit Convert CHW Coil to 2 Pipe & VFD's on SF and RF

- VFD's to be ABB or approved equal.

Isolation valves to be Flowseal High Performance Butterfly

7.2 – 7.4 VAV Conversion-Library and Lech Walesa Hall

- VAV boxes to be Nailor Industries Inc. Model 36VRS or approved equal.
- VFD's to be ABB or approved equal.

7.5 Pool Pump VFD

- VFD's to be ABB or approved equal.

7.6 Kitchen Hood Controls

- NORESCO proposes to install a Melink Intelli-Hood system to convert the kitchen hood supply and exhaust systems from constant volume to variable volume operation. Specific equipment information is provided in appendix section VI.

Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

7.1 D1 unit Convert CHW Coil to 2 Pipe & VFD's on SF and RF

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

7.2, 7.3, and *7.4* Constant Volume with Terminal Reheats to VAV conversion

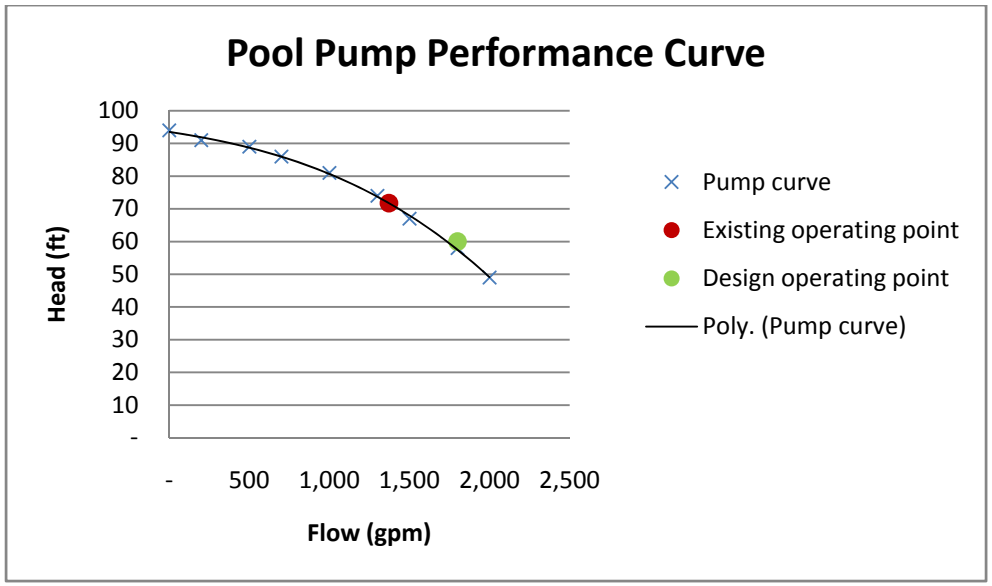
Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

7.5 Pool Pump VFD

Baseline pump energy consumption was determined based on system pressure and flow, efficiencies of the pump and pump motor, and the number of hours the pump operates on an annual basis. NORESCO's engineers performed a short term flow measurements in order to verify the flow rate through the pump under the existing conditions. We then used manufacturer's pump performance curves to determine pump head and efficiency for the measured flow rate. Since the pool pump operates at constant speed, energy consumption was calculated by multiplying the motor power by the annual operating hours.

Post-installation energy consumption was determined in the same manner as the baseline consumption. We used design flow rate and the manufacturer's pump performance curves to calculate the post-installation pump power. Energy savings were determined as the difference between the baseline and post-installation consumptions.

The pool pump performance curve and operating conditions is shown below.



Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

7.6 Kitchen Hood Controls

Baseline fan energy consumption was calculated based on the horsepower of the existing fan motors and the number of hours that the fans operate. Since the fans currently operate at a constant speed, energy consumption was calculated by multiplying the motor power consumption by the annual operating hours.

Baseline heating and cooling loads imposed by the constant volume kitchen hood systems were calculated based on the constant air flow rate and the enthalpy difference between the indoor air and the outdoor make-up air. We utilized bin weather data for Chicago, IL in these calculations.

In order to calculate the energy savings associated with this ECM, NORESCO developed an expected air flow profile for the modified system. This profile takes into account the fact that the fan speed will modulate based on cooking loads, and the average fan speed in this profile is 73% of full speed. The fan flow profile is shown in the table below.

Calculation of Air Flow Rate		
% Rated RPM	% Run Time	Average % RPM
100%	25%	25%
90%	5%	5%
80%	10%	8%
70%	15%	11%
60%	20%	12%
50%	25%	13%
40%	0%	0%
30%	0%	0%
20%	0%	0%
10%	0%	0%
	Average % RPM	73%

The fan affinity laws show that fan power consumption modulates with the cube of fan speed, and we used this relationship to calculate the fan power consumption at a given speed. We then multiplied these results by the number of operating hours in each fan speed bin to determine the annual post-installation fan energy consumption. The difference between the baseline and post-installation fan energy consumption is the fan energy savings.

We used the same flow profile that was used in the fan energy calculations to calculate the post-installation heating and cooling loads. Because the air flow rate varies directly with the fan speed, the only thing that changes between the baseline and post-installation heating and cooling energy consumption calculations is the air flow rate. The difference between these baseline and post-installation calculations is the thermal savings associated with converting the system to constant volume operation.

ECM 8 HVAC SYSTEM INFRASTRUCTURE UPGRADES (NEW EQUIPMENT)

OVERVIEW

Some of the heating, ventilating and air conditioning (HVAC) systems throughout the main campus are beyond or approaching the end of their expected service life. System performance is no longer reliable, maintenance requirements have increased significantly and replacement parts are no longer available. At the University's direction, NORESCO evaluated upgrades of the campuses highest priority infrastructure needs. The upgrades that were evaluated as part of this audit include:

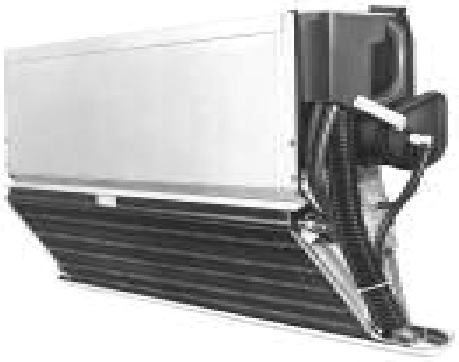


Figure 1: Induction unit Courtesy of Carrier

8.1 New Induction Units –Lech Walesa Hall

Noresco evaluated replacement of the existing two hundred twenty six (226) induction units that serve the perimeter rooms of floors 2 through 4 with new units of the same make and model. The internal components of the units will be completely replaced. A spot check of top grills will done and they will replaced where required. This ECM will reduce maintenance requirements, meet a capital improvement need and improve space comfort.

8.2 AHU Replacement Bldg E including conversion to VAV on E2 & E8

Some of the air handling units (AHUs) in Building E are in poor condition. Noresco evaluated replacing six air handling units as part of this measure. Four AHUs, E-1, E-3, E-5 and E-9, will be replaced with units of the same type and will remain constant volume. Air handling units E-2 & E-8 will be replaced with new units and converted from constant volume multizone to variable volume units with VAV boxes. Four of the AHUs have standalone return/exhaust fans. Fans E-12, E-13, E-14 and E-23 will also be replaced under this measure. This ECM will result in some energy savings, reduce maintenance requirements, meet a capital improvement need and improve space comfort.

8.3 HW Heat Exchanger Replacement Science

The Science building HTHW shell and tube heat exchanger is in poor condition and needs to be replaced. Noresco will remove the existing unit and replace it with a new shell and tube heat exchanger. This ECM will result in reduced maintenance requirements and meet a capital improvement need.

DETAILED DESCRIPTIONS

8.1 New Induction Units –Lech Walesa Hall

Existing System Description

Lech Walesa Hall has two hundred twenty six (226) Carrier model 36 RV induction units installed on the perimeter of Floors 2, 3 & 4. The units are beyond the end of their expected service life and are in poor condition. System performance is no longer reliable, maintenance requirements have increased significantly and replacement parts are no longer available.

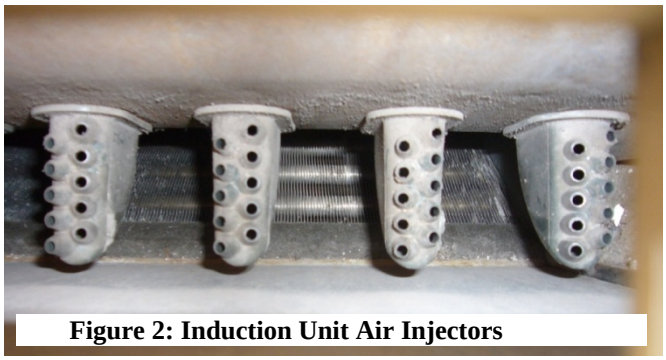


Figure 2: Induction Unit Air Injectors

Air handling unit VS-5 supplies conditioned primary air to the induction units. The induction units provide both heating and cooling for the perimeter areas utilizing a two-pipe hydronic system that is changed over seasonally. The induction coils receive hot water during the heating season and chilled water during the cooling season. Water flow through the coil is constant volume. Pressurized primary air injected through nozzles induces a secondary flow of room air. The bypass (secondary) air flow is modulated through or around the coil to maintain space temperature via a bellows and damper with self contained controls powered by system duct air pressure.

Proposed Scope of Work

Noresco proposes to replace the two hundred twenty six (226) existing induction units in Lech Walesa Hall. The new units will be the same model and manufacturer as the existing units. Noresco will furnish and install the induction units as listed in Table 1 below. Mounting strips, filters and air transition fittings will be included. A spot check of top grills will done and they will replaced where required. Installation scheduling will be coordinated with Northeastern Illinois University.

Table 1: Induction Unit Schedule

No. of Units	Type	Model No.	Description
58	Size 1 - replaces units designated AT-A on HV Drawings provided	36RV11KR31	36RV Size 1 with Changeover Control and Unit Mounted Thermostat. Unit includes ½" ODM Flare Pipe Fitting with Manual Air Vent and Non-Drainable Condensate Pan.
167	Size 2 - replaces units designated AT-B, C, D & E on HV Drawings provided	36RV21KR31	36RV Size 2 with Changeover Control and Unit Mounted Thermostat. Unit includes ½" ODM Flare Pipe Fitting with Manual Air Vent and Non-Drainable Condensate Pan.

No. of Units	Type	Model No.	Description
1	Size 4 - replaces units designated AT-F on HV Drawings provided.	36RV41KR31--1	36RV Size 4 with Changeover Control and Unit Mounted Thermostat. Unit includes ½" ODM Flare Pipe Fitting with Manual Air Vent and Non-Drainable Condensate Pan. Unit includes Air Transition Fitting and Size 4 Lint Screen

A self contained control package for each unit will be provided including changeover control with unit-mounted thermostat. All control units have a washable filter contained in an easily accessible housing and changeover element sensing coil temperature.

8.2 Building E- AHU Replacement & VAV Conversion

Existing System Description

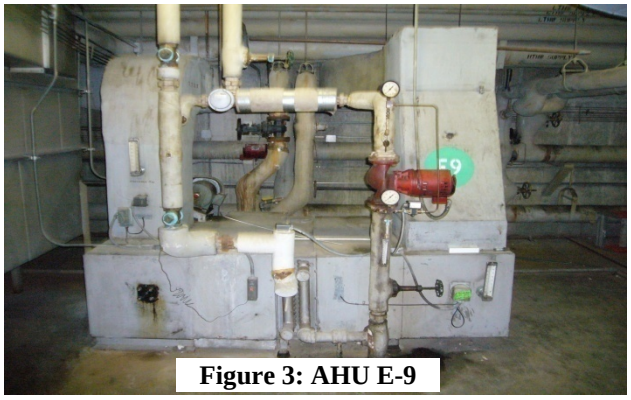


Figure 3: AHU E-9

Six of the existing air handling units E-1, E-2, E-3, E-5, E-8 and E-9 serving the E building are old and in poor condition. Air handling unit E-1 is located in a penthouse on the roof and the remaining units are located in a mechanical area between the service tunnels in the basement of E building. See Table 2, below, for a list of the existing E-Building air handling units.

The utilization and layout of the areas that the units serve has been changed and is not documented on drawings. Facility personnel walked the areas with NORESCO and identified the areas served by each unit on floor plans. Air handling unit E-6 serves the east side of the bookstore and air handling unit E-7 serves television studio. Air handling unit E-4 no longer exists. Four stand alone Return/Exhaust fans are in poor condition and need to be replaced. They are E-12, E-13, E-14 & E-23.

Table 2: Building E Existing AHU Inventory

AHU	Unit Location	Design CFM	SF HP	Type	Physical Zones (supply ducts)	Zone Control Actuators	Service Area (based on walk through with NEIU Staff)
E-1	Penthouse	3820	3	MZ	5	5	First floor west offices
E-2	Basement	21995	15	MZ	3	3	Mezzanine and west areas of book store

AHU	Unit Location	Design CFM	SF HP	Type	Physical Zones (supply ducts)	Zone Control Actuators	Service Area (based on walk through with NEIU Staff)
E-3	Basement	14480	10	MZ	4	3	West Hallway and South Hallway
E-5	Basement	10700	10		1	NA	North Hallway
E-8	Basement	10205	15	MZ	6	6	Lower Level East of Auditorium
E-9	Basement	2445	2		1	NA	Lower Level West of Auditorium

Proposed Scope of Work

Noresco will remove and replace air handling units E-1, E-3, E-5 & E-9 with units of the same configuration. Air handling units E-2 & E-8 will be removed and converted from Multizone to new VAV units. Stand alone return exhaust fans E-12, E-13, E-14 & E-23 will be removed and replaced. The units will be replaced but no ductwork will be reconfigured beyond tie in to the new air handling units.

Constant Volume AHU Replacements

AHU E-1: Replace the existing five (5) zone Multizone air handling unit with a new Multizone air handing unit with the same configuration. Install new chilled water and hot water control valves. Install new chilled water and hot water coil pumps.

AHU E-3: Replace the existing four (4) zone Multizone air handling unit with a new Multizone air handing unit with the same configuration Install new chilled water and hot water control valves. Install new chilled water and hot water coil pumps.

AHU E-5: Replace the existing single zone air handling unit with a new single zone air handing unit with the same configuration. Install new chilled water and hot water control valves. Install new chilled water and hot water coil pumps.

AHU E-9: Replace the existing single zone air handling unit with a new single zone air handing unit with the same configuration. Install new chilled water and hot water control valves. Install new chilled water and hot water coil pumps.

Conversion from Multizone to VAV

AHU E-2: Replace the existing three (3) zone Multizone air handling unit with a new air handing unit that has supply fan, economizer, chilled water coil and hot water coil. The zone serving the mezzanine only utilizes the cold deck presently and the area has four sub-zones with reheats. This zone will have four (4) VAV boxes installed near the existing reheat coils serving the mezzanine. The other two (2) zones will have terminal units with reheat coils. New chilled water and hot water coil pumps will be installed. New chilled water and hot water control valves will be installed.

AHU E-8: Replace the existing six (6) zone Multizone air handling unit with a new air handing unit that has supply fan, return fan, economizer, chilled water coil and hot water coil. Five terminal units with reheats will be installed on each of the zones. Terminal unit location to be field determined and approved by owner. New chilled water and hot water coil pumps will be installed. New chilled water and hot water control valves will be installed.

Noresco will provide six (6) new AHU to replace the existing units as described in Table 3.

Table 1: Building E New AHU Summary

Unit ID	Unit Model Number	Unit Description
E-1	39MJ1608H4SC43NBQE	**39M AHU 08** *Unit Parameters* *Unit Size: Size 08 39MN* *Insulation: R-13 Double Wall Sealed Panel* *Exterior Finish: Painted Exterior Panels* *Interior Finish: Galvanized Interior Panels* *Level I Thermal Break* *Filter Mixing Box* *Blow-Thru Supply Fan* *Multi-Zone Coil*
E-2	39MJ1750C7SN433PPK	**39M AHU 50** *Unit Parameters* *Unit Size: Size 50 39MN* *Insulation: R-13 Double Wall Sealed Panel* *Exterior Finish: Painted Exterior Panels* *Interior Finish: Galvanized Interior Panels* *Level I Thermal Break* *Filter Mixing Box* *Plenum* *Hot Water Coil* *Plenum* *Chilled Water Coil* *Draw-Thru Supply Fan*
E-3	39MJ1630W-3J43NBQN	**39M AHU 30** *Unit Parameters* *Unit Size: Size 30 39MN* *Insulation: R-13 Double Wall Sealed Panel* *Exterior Finish: Painted Exterior Panels* *Interior Finish: Galvanized Interior Panels* *Level I Thermal Break* *Filter Mixing Box* *Plenum* *Blow-Thru Supply Fan* *Multi-Zone Coil*

Unit ID	Unit Model Number	Unit Description
E-5	39MJ1721LM8X44NBNN	**39M AHU 21** *Unit Parameters* *Unit Size: Size 21 39MN* *Insulation: R-13 Double Wall Sealed Panel* *Exterior Finish: Painted Exterior Panels* *Interior Finish: Galvanized Interior Panels* *Level I Thermal Break* *Filter Mixing Box* *Plenum* *External Face & Bypass Damper* *Hot Water Coil* *Chilled Water Coil* *Plenum* *Draw-Thru Supply Fan*
E-8	39MJ1721BV4N43NBQ4	**39M AHU 21** *Unit Parameters* *Unit Size: Size 21 39MN* *Insulation: R-13 Double Wall Sealed Panel* *Exterior Finish: Painted Exterior Panels* *Interior Finish: Galvanized Interior Panels* *Level I Thermal Break* *Filter Mixing Box* *Plenum* *Hot Water Coil* *Plenum* *Chilled Water Coil* *Draw-Thru Supply Fan*
E-9	39MJ1706391143NBQF	**39M AHU 06** *Unit Parameters* *Unit Size: Size 06 39MN* *Insulation: R-13 Double Wall Sealed Panel* *Exterior Finish: Painted Exterior Panels* *Interior Finish: Galvanized Interior Panels* *Level I Thermal Break* *Filter Mixing Box* *Plenum* *Hot Water Coil* *Chilled Water Coil* *Draw-Thru Supply Fan*

The new air handling unit installation will include:

- Premium dampers on outside air and return air on mixing box
- Premium efficiency motors
- Provide and install new inline CHW coil pumps.
- Provide and install new inline HW coil pumps

- Provide and install new HW and CHW water control valves
- Provide and install new VAV boxes for the AHUs as listed:

  i) E-2: (2) VAV boxes at unit plus (4) sub-zones: (2) reheat coils
  ii) E-8: (6) VAV boxes; (6) reheat coils.

- Provide and install new VFDs with automatic bypass starters for fans as listed:

  i) E-2 Supply Fan – 25 HP
  ii) E-12 Return Fan – 7.5 HP
  iii) E-8 Supply Fan – 15 HP
  iv) E-23 Return Fan – 5 HP

- Provide and install new stand alone return fans as listed:

  i) E-12 Return Fan – 7.5 HP
  ii) E-13 Return Fan – 5 HP
  iii) E-14 Return Fan – 5 HP
  iv) E-23 Return Fan – 5 HP

General Requirements

- Provide NEBB-certified balance reports for the hot and chilled water system.
- Install new equipment in accordance with all manufacturer recommendations.
- Provide required piping and piping modifications to accommodate the new work including isolation and balancing valves.
- Provide duct transitions and connections required for a complete installation.
- Provide and install pipe and duct insulation.
- Provide connections and or transitions to existing supply and return chilled water and hot water piping.
- Make necessary tie-ins to existing utilities.
- Drain, fill, and test all piping as required for the installation work.
- Provide startup from the manufacturer of the new equipment.
- Provide and install the required electrical work for the new equipment. Work shall include:

  a) Conduit, Power Wiring, Disconnect Switches
  b) Motors and Motor Starters
  c) VFDs listed in table 5.
  d) Testing And Startup services

8.3 HW H/EX Replacement Science

Figure 4: Science HW Heat Exchanger

Existing System Description

The Science Building Mechanical Room connected to the utility tunnel contains a shell and tube heat exchanger manufactured by TACO. The heat exchanger dates back to June, 1971. The existing heat exchanger is rated for 375 ^{o}F at 150 psi. The heat exchanger provides low temperature hot water (LTHW) for the building using high temperature hot water (HTHW) from the central plant. The LTHW supplies hot water for the HVAC systems in the Science building. The heat exchanger is in poor condition and no longer provides reliable operation.

Proposed Scope of Work

Noresco will furnish and install one (1) new shell and tube heat exchanger assembled with steel shell, ¾" – 18 Birmingham Wire Gauge –copper tubes, steel tube sheet, baffles and fabricated bonnet. The heat exchanger will be fit to the existing secondary headers.

The heat exchanger shall be rated to heat 450 GPM of LTHW from 180 degrees to 240 degrees with 505 GPM of HTHW at 310 degree E.W.T. and 250 degree L.W.T., based on a 0.0005 fouling factor, 8 ft PD thru shell, and 3 ft PD thru tubes.

The implementation scope of work includes:

- Demolish and remove existing heat exchanger.
- Existing secondary inlet and outlet headers will remain.
- Existing pumps, control valve and piping will remain.
- Provide new isolation valves on primary and secondary inlet and outlet
- Install new equipment in accordance with all manufacturer recommendations.
- Provide required piping and piping modifications to accommodate the new Work.
- The new heat exchanger and affected piping will be insulated under the HTHW insulation measure described in ECM 4.2
- Provide connections and or transitions to existing HTHW supply and return and the secondary headers.
- Drain, fill, and test piping as required for the installation work.
- Provide startup from the manufacturer of the new equipment.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

Work for these measures may need to be coordinated with temporary system shutdowns including one of the two annual HTHW system shut-downs.

ENVIRONMENTAL ISSUES

Abatement of hazardous materials including asbestos will be the responsibility of Northeastern Illinois University. The Building E air handling units, hydronic piping and duct work may contain asbestos. The Science Building heat exchanger insulation and piping joints may also contain asbestos The asbestos containing materials must be identified and abated prior to any work in these areas. Noresco will work with the University to identify work areas that may be impacted by potential asbestos containing materials

EQUIPMENT INFORMATION

8.1 New Induction Units –Lech Walesa Hall

- Design basis is Carrier model 36RV Induction Units, or approved equal.

8.2 Building E-AHU E-1, 2, 3, 5, 8 & 9

- Air handling Units will be Carrier Model 39M or approved equal.
- VAV boxes to be Nailor Industries Inc. Model 36VRS or approved equal.
- Return/Exhaust Fans to be Greenheck Series 21 BISW or approved equal

8.3 NEW HTHW Heat Exchanger –Science Building

- Design basis is Bell & Gossett Model QWU 188-49 or approved equal

Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

8.1 New Induction Units –Lech Walesa Hall

This ECM is recommended as an infrastructure improvement. Some reduction in energy will result due to more efficient space temperature control. These savings are calculated under ECM 3: Control System Upgrade

8.2 Building E-AHU E-1, 2, 3, 5, 8 & 9

This ECM is recommended as an infrastructure improvement. Some reduction in energy will result from improvement in control, low leak dampers and premium efficiency motors. These savings are calculated under ECM 3: Control System Upgrade and ECM 5: VAV ECMs.

8.3 NEW HTHW Heat Exchanger –Science Building

This ECM is recommended as an infrastructure improvement. No savings are being claimed for this measure. Savings for insulation of bare areas are included in ECM 2: HTHW insulation measure.

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix.

ECM 9 WINDOW UPGRADES

OVERVIEW

Measure Summary

NORESCO has conducted an investigation of the Windows serving the exterior corridors connecting Buildings A, B, C, D, E and F of the NEIU campus and found that there are opportunities for related energy conservation measures (ECMs):

The existing window systems at the proposed buildings are comprised of single pane glazing, aluminum in-fill panels and operable window sashes. NORESCO will replace the window in each of the four buildings with new TR2500 out projecting operable windows where applicable and fixed TR2800 windows.

NORESCO proposes to implement the ECM at the following locations:

- Building D (North and South Exterior Corridors and West Wall of Courtyard)
- Building E (North Corridor Wall, East Wall of Courtyard and West Corridor Wall from Building F Corridor to the Southeast Vestibule Entrance)
- Building B (Corridor Connecting Building B to Building C)
- Building A (Corridor Connecting Building A to Building C)
- Building C (East and West Corridor Leading Into the Vestibule Area of Building C, Connected by Building A and B)
- Building F (East and West Corridor from Building F to Building E, Excluding new Entrance Doors and Windows on the West Corridor Wall)

EVALUATED MEASURES

Proposed Improvements

NORESCO proposes to replace the existing windows with new, energy efficient, double pane, low "E" extruded aluminum windows manufactured by TRACO or approved equal

Scope of Work

Following is a brief description of the work to be undertaken in each area:

- Remove and dispose of existing windows, doors and framing.
- Provide and install new windows, doors and associated door hardware.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

The facilities will benefit from reduced energy consumption. Unnecessary building envelope losses and enhanced appearance and comfort

Special Operating Requirements

The Windows and associated equipment will have no special operational or maintenance requirements other than cleaning.

Maintenance and repair of the new equipment is expected to be minimal.

ENVIRONMENTAL ISSUES

Existing window caulking and associated putty shall be tested by the Facility prior to any work.

Any materials containing asbestos shall be removed by the Facility prior to any work.

EQUIPMENT INFORMATION

Manufacturer Specification

The proposed equipment will be manufactured by

- Traco Products

Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

ECM 10 RENEWABLE INITIATIVES

OVERVIEW

SOLAR DOMESTIC HOT WATER HEATING – PHYS ED BUILDING

The Physical Education (PE) Building is equipped with a 7,800 sq. ft. indoor swimming pool. The water for the swimming pool is maintained at 82 °F, and two natural gas-fired boilers are used to heat the pool water to this temperature.

NORESCO evaluated the installation of a solar water heating system for the swimming pool. The new system will consist of 1,080 sq. ft. of glazed flat plate solar collectors mounted on the roof of the building as well as associated pumps, heat exchangers, and controls located in the building's mechanical equipment room. This new solar system will provide a source of renewable energy to offset a portion of the natural gas use that is required to maintain the swimming pool at its temperature setpoint.

Although there is no guarantee, we expect that monetary incentives will be available from State energy efficiency or renewable energy funds to offset installation costs for this project. If the University moves forward with this project, NORESCO will assist with the application process for these incentives.

SOLAR DOMESTIC HOT WATER HEATING – BUILDING H

NORESCO evaluated installing a solar water heating system on the roof of Building H. This system would be designed to heat domestic hot water for Buildings E, F, H, and the Fine Arts Building. The system would include glazed solar collectors, water storage tanks, a drainback tank, a heat exchanger, circulating pumps, and controls. During the course of the Investment Grade Audit, NORESCO Modeled water consumption in Buildings E, F, H, and Fine Arts, and we found that the daily consumption of hot water is much lower than previously anticipated – about 15 gallons per day on average. Implementation of low flow water fixtures would further reduce this hot water consumption. Even the smallest commercial grade solar water heating systems are much too large for this minimal amount of domestic hot water use, so NORESCO has not recommended the installation of a solar water heating system on Building H.

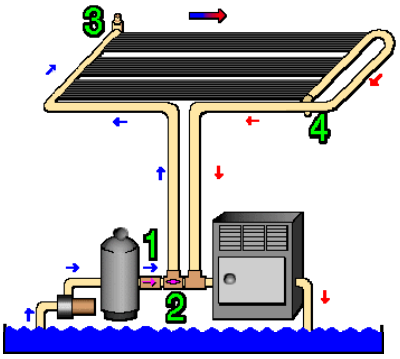
DETAILED DESCRIPTION

Existing System Description

The swimming pool in the PE Building has a surface area of 7,800 sq. ft. and is maintained at a water temperature of 82 °F year-round. Two gas-fired boilers are used to provide heating hot water to air handling units as well as heating for water in the swimming pool. There are currently no renewable systems serving the swimming pool, and the roof of the PE Building is suitable for the installation of solar collectors.

Proposed Scope of Work

NORESCO evaluated the installation of a solar water heating system on the roof of the PE Building to serve the building's indoor swimming pool. The heat collected from the new renewable solar system will offset a portion of the natural gas that is currently used to heat the pool water.



Typical solar pool heater design

The proposed solar water heating system will consist of 1,080 sq. ft. of glazed flat plate solar collectors on the metal seam roof above the equipment room. NORESCO will install pumps to circulate water through the solar collectors and into new heat exchangers that will be installed as part of this project. The new heat exchangers will be tied into the pool water system to allow for heat transfer between the solar collectors and the pool water. The capacity of the solar system will not be enough to serve all of the pool water heating needs on most occasions, so the existing pool water heating system will operate in parallel with the new solar heating system.

Indoor pool water heating is a particularly good application for solar water heating systems, as swimming pool water temperatures are relatively constant. This maximizes the effectiveness of the solar system because all available heat collected from the system can be used to heat the pool water. This is in contrast to domestic hot water heating systems, where peak hot water usage may not coincide with periods of peak solar heat collection.

NORESCO will install a complete solar water heating system to serve the swimming pool in the PE Building. This system will include the following components.

- Twenty-seven (27) 4' x 10' AET solar collectors with metal roof mounting hardware
- Three (3) double-walled copper heat exchanger/drainback tanks
- Three (3) Grundfos solar circulating pumps
- One (1) anti-freeze (low toxicity) fluid handling package
- Three-way valves on the pool water supply and return lines to allow for tie-in of solar heating system
- One (1) pool heating assist package with temperature control heat pump exchanger
- Three (3) IMC Eagle solar controls with digital displays
- One (1) BTU meter to record system output
- All sensors, gauges, piping, fittings and insulation required for a complete and operational system

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

NORESCO does not expect to encounter any special installation requirements during the implementation of this ECM. The new solar collectors will be located on the roof above the equipment room, and the new drainback tanks, pumps, and heat exchangers will be installed in the mechanical equipment room. Therefore, we do not expect the installation of this ECM to affect building occupants, and its implementation will be transparent to users of the swimming pool.

ENVIRONMENTAL ISSUES

This ECM involves installing a solar swimming pool water system to augment the existing gas-fired heating system. The renewable energy produced by the new solar system will offset purchased natural gas, so this measure will have a positive environmental impact due to reductions in non-renewable energy consumption and associated reductions in emissions associated with burning natural gas.

EQUIPMENT INFORMATION

Manufacturer Specification

NORESCO expects to install glazed solar collectors manufactured by Alternate Energy Technologies, LLC. Final product selection to be approved by the University.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

The energy savings calculations for the solar thermal system were performed using RETScreen International Clean Energy Project Analysis Software, Version 4.0. RETScreen is a widely accepted tool for calculating the energy consumption of renewable energy systems. This software, which can be found on the RETScreen International website, was developed for public use and is managed under the leadership and ongoing financial support of Natural Resources Canada's (NRCan) CANMET Energy Technology Centre – Varennes (CETC-Varennes).

The RETScreen software program calculates the annual solar radiation on a solar panel for a given array orientation using monthly values of solar radiation on a horizontal surface. This is accomplished using historical solar radiation data and geographical information for Chicago, IL. It then calculates the system's energy production given ambient conditions and available solar radiation. Finally, it evaluates the interaction of the various components of the solar heating system and the losses in the system, such as losses in the heat exchanger, and it then predicts how much energy can be expected to be transferred to the pool water from the system on an annual basis.

ECM 11 CCICS EFFICIENCY & INFRASTRUCTURE UPGRADES

OVERVIEW

11.1 Lighting Efficiency Improvement

The vast majority of light fixtures at the CCICS building are linear fluorescent fixtures that have already been upgraded to T8 lamps and electronic ballasts. A limited lighting efficiency upgrade, as described in ECM 4, would replace the few remaining T12 fixtures to T8 and replace remaining incandescent lamps with compact fluorescent. Costs and savings for this measure are included in ECM 4: Lighting Efficiency Upgrades

11.2 Water Efficiency Improvements

We did not evaluate water efficiency improvements at CCICS due to uncertain usage patterns, but will consider including such measures in a final performance contract project at the University's direction.

11.3 Control System Upgrade

The existing HVAC control system at the CCICS consists of pneumatic components. During the detailed survey, it was observed that the HVAC equipment controls are older and have limited functionality. The chiller and boilers are manually operated with no set schedule. Based on data collected during the detailed survey, several enhancements were found that can be implemented to optimize the system and improve system performance and reduce energy consumption.

NORESCO proposes to replace the existing pneumatic control system with a new direct digital control (DDC) system. As part of this replacement, we will implement the following energy saving control strategies:

- Chilled water temperature reset
- Hot water temperature reset
- Condenser water temperature reset
- HVAC system scheduling and temperature control

The installation of a new DDC system will provide operators with significantly improved control functionality and updated diagnostic tools and monitoring capabilities. The result of installing this system and implementing energy saving control strategies will be reduced electric, heating, and cooling energy consumption, and an increased ability for the operating and maintenance staff to monitor, control, operate and maintain HVAC and control systems. Costs and savings for this measure are included in ECM 6: Control System Upgrades

11.4 New Heating Boilers

The CCICS building has two hot water boilers that supply the water side for the building's heating HVAC system. One of the boilers is used as the primary boiler, providing all the heating needs for the building, while the other serves as a backup unit. Both boilers are old and severely in need of replacement, as they have reached the end of their useful lives.

Current Boiler Location

NORESCO recommends the installation of three new high efficiency hot water boilers to meet the building's heating load requirements. Two of the boilers will be able to provide the output necessary for the peak building heating load, while the third boiler will provide redundancy.

The replacement of the boilers will result in improved equipment reliability, and significantly higher efficiencies than the exiting boilers. The new boilers would be tied into the new Energy Management Control System that may be installed under this project

11.5 Cooling Tower Fan VFD

The CCICS building has one cooling tower that provides condenser water cooling for the building's chiller. The tower is equipped with two constant speed fans and is served by one constant volume condenser water pump.

While both the cooling tower and the chiller are in relatively good condition, the tower fans run at a constant speed whenever the cooling tower operates. Running the fans at a high speed is not always necessary to cool the condenser water given the varying value of the outdoor wet bulb temperature. Doing so unnecessarily consumes energy during those times at which the fan speed may be decreased.

NORESCO evaluated the installation of variable frequency drives (VFD) on the existing tower fans. However, due to the relative low run hours of the CCICS cooling towers this measure does not result in a very good return on investment.

11.6 Domestic Water Pump Package

The existing domestic water pump system is old, deteriorated and in need of replacement. Noresco proposes to replace the existing DW pump package and controls with a new skid mounted package that includes two 7.5 HP pumps with controls and VFD. This will meet a capital need and raise the pumps out of the mud preventing flooding of the equipment.

DETAILED DESCRIPTION

11.1 Lighting Efficiency Improvement

Refer to ECM – 4 Lighting Efficiency Upgrades for a description of the potential lighting improvements at the CCIS Building

11.2 Water Efficiency Improvements

Not applicable

11.3 Control System Upgrades

Existing System Description

Air handling units are used to provide heating, cooling and ventilation to the building. Currently, there is a night setback strategy for the units that allows operation of the units according to the occupancy schedule of the building. However, the heating and cooling set points are rather irregular, and do not consistently meet the temperature requirements of the spaces served.

AHU Pneumatic Actuators

The system consists of four primary multizone air handling units which serve the classroom and office areas and one single zone unit dedicated to the Auditorium. There is also one very small unit that serves the projection room. Return air for the multizone units flows through a common plenum system and mixes with outside air before it passes through the heating and cooling coils of each unit. Each zone has a separate duct that extends from the air handling unit and is equipped with a pair of zone dampers controlled by zone thermostats.

Zone dampers mix heated air from the heating coils and cooled air from the cooling coils to regulate the temperature of each zone. The dampers mix hot and cold air in proportions that keep the flow of mixed air to each zone approximately constant. This results in simultaneous heating and cooling when both coils are operating.

Most of the HVAC equipment and temperature set points are controlled locally, with primarily pneumatic actuators receiving signals from sensors and thermostats. These pneumatic signals are processed at central pneumatic panels containing receiver-controllers, electric-to-pneumatic and pneumatic-to-electric switches, and time-delay relays. Boiler, chiller, pump, and fan operations are controlled manually with relatively simple controls.

While the existing pneumatic controls on the air handling systems appear to be well maintained and generally operate properly, they provide only limited capabilities for implementing energy efficient operating strategies. Furthermore, they do not provide any mechanism for monitoring system operating parameters and performance. Temperature setpoints such as chilled water and hot water supply temperatures as well as start/stop of the HVAC equipment, including the chiller, are currently being controlled manually, which results in excessive equipment runtime and poor temperature control.

The control system end devices are pneumatic based components, with analog switches, sensors, gauges, and transmitters. The system is integrated throughout all building HVAC elements, and provides the basis for control of the air handling units, boilers, pumps, chiller and hot water heat exchangers. The current control strategy for the air handling units requires maintenance personnel to manually set back the temperature at night when occupancy decreases significantly. There currently is no control strategy to reset the chilled water, hot water, or condenser water temperatures when the building is not occupied.

AHU Pneumatic Gauges

Proposed Improvements

NORESCO proposes to replace the existing pneumatic controls with a new building-wide DDC system. Savings will be obtained by using the new DDC system to modify existing control strategies and adding several new control strategies through the use of the new automated energy management system. Based on the detailed site survey and discussions with maintenance personnel, the following opportunities for optimization of equipment operation were identified and evaluated.

- Replace the existing pneumatic control system with a new DDC system that monitors and manages all of the building HVAC components through one primary head end interface. This will allow individual strategies to be closely observed and controlled automatically.

- Implement tighter space temperature control through the new EMCS and establish consistent night and weekend setback. Applying set temperature control during occupied times and allowing space temperatures to drift during unoccupied times prevents air handling units from overheating and over cooling during occupied periods as well as heating and cooling spaces during unoccupied periods.

- Establish temperature resets for chilled water, hot water, and condenser water. Utilizing the new EMCS, the temperature set points for each of these items will be regulated based on outdoor air temperature and load requirements. Resetting water temperatures based on outdoor air temperature will produce savings by increasing the efficiency of the heating and cooling systems.

The following work is included in the proposed scope of work:

- Install building wide energy management system (EMCS) and implement energy saving control strategies.
- Run communication cables as required.
- Install one computer to serve as a head end equipped with the latest controls software.
- Implement the following control strategies

Chilled water supply temperature reset

OA Dry Bulb Temperature	Chilled Water Supply Temperature
50 (ADJ)	47 (ADJ)
85 (ADJ)	44 (ADJ)

Heating hot water supply temperature reset

OA Dry Bulb Temperature	Hot Water Supply Temperature
30 (ADJ)	180 (ADJ)
70 (ADJ)	120 (ADJ)

Condenser water temperature reset

OA Wet Bulb Temperature	Condenser Water Temperature
48 (ADJ)	75 (ADJ)
73 (ADJ)	85 (ADJ)

Improved Space Temperature Control

	Occupied	Unoccupied
Operating schedule	8am-9pm (6 days/week) (ADJ)	8am-pm (1 day/week, Holidays) (ADJ)
Cooling setpoint	76°F (ADJ)	86°F (ADJ)
Heating setpoint	70°F (ADJ)	60°F (ADJ)

Points List

Building "CCIS"						
		Point Type				
Device/Point Name	Device	DI	DO	AI	AO	SW
Multi-zone Units AHU S-1, 2 and 4						
Unit Enable	N/A					1
Supply Fan Start/Stop	Relay		1			
Supply Fan Status	Current Switch	1				
Return Fan Start/Stop	Relay		1			
Return Fan Status	Current Switch	1				
Mixed Air Temperature				1		
Mixed Air Dampers					1	
Filter Differential		1				
Hot Deck Heating Coil Valve	Actuator				1	
Low Temperature Detector		1				
Hot Deck Discharge Temperature				1		
Cold Deck Discharge Temperature				1		
Hot Deck Heating Coil Pump Start/Stop	Relay		1			
Hot Deck Heating Coil Pump Status	Current Switch	1				
Return Air Temperature				1		
Smoke Detector						
Zone Temperatures AHU S-1 (5 zones)				5		
Zone Hot/Cold Deck Damper Control AHU S-1 (5 zones)					5	
Zone Temperatures AHU S-2 (4 zones)				4		
Zone Hot/Cold Deck Damper Control AHU S-2 (4 zones)					4	
Zone Temperatures AHU S-4 (9 zones)				9		
Zone Hot/Cold Deck Damper Control AHU S-4 (9 zones)					9	
Single Zone Unit AHU S-3						
Supply Fan Start/Stop	Relay		1			
Supply Fan Status	Current Switch	1				
Return Fan Start/Stop	Relay		1			
Return Fan Status	Current Switch	1				
Heating Coil Valve	Actuator				1	
Mixed Air Dampers					1	
Cooling Coil Valve	Actuator				1	
Discharge Air Temperature				1		
Return Air Temperature				1		
Mixed Air Temperature				1		

Low Temperature Detector		1				
Space Temperature				1		
Heating Coil Pump Start/Stop	Relay		1			
Heating Coil Pump Status	Current Switch	1				
Return Smoke Detector						
Supply Smoke Detector						
Boiler Make Up Air Unit						
Supply Fan Start/Stop	Relay		1			
Supply Fan Status	Current Switch	1				
Face & Bypass Dampers	Acuator				1	
Discharge Air Temperature				1		
Outside Air Damper	Actuator		1			
Low Temperature Detector		1				
Boilers						
Boiler 1 Start/Stop		1				
Boiler 1 Status		1				
Boiler 1 Alarm		1				
Boiler 2 Start/Stop			1			
Boiler 2 Status		1				
Boiler 2 Alarm		1				
Primary Pump 1 Start/Stop			1			
Primary Pump 1 Status		1				
3 way Secondary Valve					1	
Secondary Pump 1 Start/Stop			1			
Secondary Pump 1 Status		1				
Primary Supply Temperature				1		
Secondary Supply Temperature				1		
Secondary Return Temperature				1		
Draft Induced Fan System						
Fan Start/Stop			1			
Fan Status		1				
Chillers						
Chiller Start/Stop			1			
Chiller Status		1				
Chiller Alarm		1				
Tower 1 Start/Stop			1			
Tower 1 Status		1				
Tower 1 Speed					1	
Tower 2 Start/Stop			1			
Tower 2 Status		1				
Tower 2 Speed					1	
Condensor Pump Start/Stop			1			
Condensor Pump Status		1				
Condensor Supply Temperature				1		
Condensor Return Temperature				1		
Chilled Water Supply Temperature				1		
Chilled Water Return Temperature				1		
Chilled Water Pump Start/Stop			1			
Chilled Water Pump Status		1				

11.4 New Heating Boilers

Existing System Description

The existing Rite Model 400 gas fired hot water boilers are located in the basement's North end. The units supply hot water through two constant volume heating hot water pumps and have forced draft fans with 1.5 HP motors. The boilers and are rated with an output capacity of 3,200 MBH each.

Existing Boiler Condition

CCICS maintenance personnel currently alternate boilers to meet the building's heating needs, however both boilers have increasingly decreased functionality and efficiency due to age and use. Both boilers are beginning to show signs of rust and wear, and the hull of one boiler has begun to crack, causing minor leaks in the system and reduced the overall heating system efficiency. The existing boilers and the domestic hot water heater tie into a common steel lined stack inside a brick chase. There is an induced draft fan tied into the system. The steel liner is in poor condition. The wall between the chiller room and boiler room has gaps and openings that need to be sealed and the chiller room needs a refrigerant exhaust system. There is an existing refrigerant monitor.

Proposed Improvements

NORESCO proposes to replace the two existing boilers with three, high efficiency RBI Futera III 2000 modulating gas-fired hot water boilers and associated hot water pumps.

The poor seasonal efficiency of the existing boilers when compared to the higher efficiency of the proposed units will allow for a significant reduction in gas consumption. Low seasonal efficiency of the boiler as a system is the result of jacket losses, cycling, draft, and purge losses associated with boilers equipped with power burners.

Two of the replacement boilers will operate together to meet the peak heating load at any given time, with the third serving as a back up. Additionally, NORESCO proposes to link all three new boilers to the new EMCS system for automated heating management as well as hot water temperature control (see ECM 11.3 Energy Management Control System.)

Scope of Work

- Demolish and remove the two (2) existing boilers and all debris generated by the work.
- Demolish and remove all boiler breaching and the induced draft fan

- Demolish and remove the B-vent stack above the roof level.
- Furnish and install one (1) new primary circulating pump for each boiler.
- Furnish and install a new buffer tank hot water tempering valve.
- Provide all materials, labor and rigging equipment required to receive new boilers for the CCICS Building.
- Furnish and install (3) new RBI Futera III modulating gas-fire, hot water boilers Model 2000. Each rated at 1,699 MBH output capacity (will provide 50% redundancy).
- Provide all required gas, electrical and piping connections.
- Insulate new and affected heating pipe.
- Furnish and install new smoke pipe from new boilers and existing water heaters to a termination point above the boiler room roof. Existing breeching will be capped and abandoned in place.
- Seal chiller room and provide chiller room ventilation system. Tie ventilation system into existing refrigerant monitor.
- Provide a Heat Timer (or equal) self contained, modular boiler control system (including wells, end devices, wiring).
- Provide all of the software and programming required for a complete and functional hot water heating system.
- Provide and install DDC in accordance with the points list shown in ECM 11.3.

11.5 Cooling Tower Fan VFD

Existing System Description

The CCICS building currently uses one cooling tower which provides heat rejection for the chiller condenser water. The cooling tower is located on the rooftop of the building, where waste heat is rejected into the atmosphere. The two 10 HP constant speed fan motors draw air through the tower to cool the condenser water which is then pumped through a 10 HP constant volume pump to the chiller.

The water temperature exiting the cooling tower is dependent upon the outdoor wet-bulb temperature and whether or not the fan is running. The annual fan operation is currently based upon the operation of the chiller, which functions primarily during the summer months only. The tower fan cycles on and off based on the chiller's entering condenser water temperature set

point. The cooling tower fans, as they function now, do not modulate fan speed. The fans are either completely on, running at a constant rate, or completely off.

Proposed Improvements

CCICS Building Chiller System

NORESCO evaluated installing variable frequency drives on the cooling tower fan motors. The variable frequency drives will vary the motor fan speeds to create the exact flow required through the cooling tower to maintain the condenser water temperature set point. The savings from this energy conservation method result from the decrease in fan horsepower required when variable speed control is used.

Installation of the VFDs on the existing constant speed cooling tower fans will modulate fan speed based on leaving condenser water temperature. As water enters the tower for cooling, the VFDs will adjust the fans speed based on the percent required to cool the water to the desired condenser water supply temperature. Reduced energy consumption, and reduced maintenance requirements are among the benefits of this retrofit.

Previously, as the cooling tower fans cycled between the on and off positions, higher amounts of energy was consumed due to high fan speed and operating time. Having VFDs on the tower fans will generate energy savings by reducing this speed. Additionally, installation of the VFDs will implement a programmed rate of increase and decrease, thereby creating a type of soft start that steadily modulates the fan motors, allowing the life of the motors to be increased over time.

Because of the low run hours of the towers at CCICs this measure has a relatively long payback period.

11.6 Domestic Water Pump Package

The existing domestic water pump system is old, deteriorated and in need of replacement. The existing DW pumps are 7.5 HP and sit on cinder blocks on a mud floor. The control panel and starters are mounted on the wall next to the pumps. The pumps are in poor condition and have been flooded at times.

1: 70VS Variable Speed Pressure Booster. Courtesy of Bell & Gossett

2 Existing DW pumps

NORESCO proposes to replace the existing DW pump package and controls with a new skid mounted package that includes two 7.5 HP pumps with controls and VFD. This will meet a capital need and raise the pumps out of the mud preventing flooding of the equipment.

11.7 Misc Measures

The HVAC system's water side currently utilizes two Rite Model 400 gas fired hot water boilers, one 125 ton Trane water cooled chiller, and one cooling tower equipped with a constant speed fan. There are two constant volume heating hot water pumps and one constant volume chilled water pump which supply hot water and chilled water to the air handling units. Although the chiller is still in good condition, it is oversized for the building load. There really is no practical solution to addressing the over capacity of the chiller according to the chiller manufacturer.

The HVAC system's air side consists of four primary multi-zone air handling units which serve the classroom and office areas, one single zone unit dedicated to the Auditorium, as well as one small unit devoted to the projection room. It could not be economically justified to convert these units to VAV operation. Replacing the existing motors with high efficiency motors is recommended when the existing motors burn out.

INTEGRATION WITH EXISTING SYSTEMS AND OPERATIONS

Work under this ECM will be done during normal working hours. The work will take place in both the mechanical room spaces and on the roof. NORESCO will coordinate all work with building maintenance personnel. There is no direct impact on the facility occupants through the implementation of this measure.

Special Operating and Maintenance Requirements

NORESCO expects maintenance of the installed equipment to be comparable to current maintenance requirements.

ENVIRONMENTAL ISSUES

Abatement of hazardous materials including asbestos will be the responsibility of Northeastern Illinois University. The air handling unit and duct insulation, piping and piping joints may contain asbestos. The asbestos containing materials must be identified and abated prior to any work in these areas.

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EQUIPMENT INFORMATION

11.3 Control System Upgrades

NORESCO will install equipment as manufactured by (or equal to) Rixon Custom Equipment located in Carol Stream, IL.

11.4 New Heating Boilers

NORESCO expects to install RBI Futera III model 2000 modulating gas-fired, hot water boilers, Model 2000, or approved equal. Each boiler is expected to be rated at 1,700 MBH output capacity.

11.5 Cooling Tower Fan VFD

VFDs will be ABB or approved equal

11.6 Misc Measures

Booster Pump Package will be Bell & Gossett 70VS Variable Speed Pressure Booster or approved equal

Specific product information is included in Section 8.0 Appendix, or will be provided upon request.

BASELINE ENERGY ANALYSIS AND SAVINGS CALCULATIONS

Refer to Section 3.0: Baseline Analysis for a detailed report of how the baseline was developed and savings were calculated for this ECM.

Field measurement data, baseline energy analysis and savings calculations are contained in Section 8.0 Appendix

5. FINANCIAL ANALYSIS

ANNUAL PROJECT CASH FLOW ANALYSIS

NORESCO recognizes that NEIU would like to use the savings from this Performance Contracting project to fund the program and also capture enough savings to create an option to address more capitally intensive improvements such as new induction units at LWH, a solar hot water heating system and various improvements to CCICS. NORESCO followed the direction of NEIU and developed a project based on an estimated interest rate of 5.0%, an energy escalation factor of 3.5% and a maximum term of 20 years. As illustrated herein, over $7.4 Million dollars worth of improvements can be funded matching the criteria set forth by NEIU. Also, the illustrated cashflows represent a stepped payment scenario yielding a net savings ever year. An estimate of construction period interest costs were calculated but the savings realized during the construction period were not, creating a more conservative approach and a financial "cushion" for NEIU. Also, after NEIU determines the final scope of the project, NORESCO will work collaboratively with NEIU personnel to secure available grants and incentives as appropriate.

The following pages illustrate an all inclusive ECMs chart along with two separate scenarios that meet the financial criteria set forth by NEIU. The first of the two scenarios is a more comprehensive program that cashflows in 20 years and the second is a reduced scope program that will cashflow in 16 years. Recently a number of scope changes were discussed and as such are included in the ECM descriptions and incorporated in the latest cost estimates as illustrated below. As previously discussed, the costs will vary in each scenario per ECM based mainly on the fixed costs that is distributed among all ECMs.

Northeastern Illinois University
All ECMs

#	ECM	Price	Savings	Annual M&V	Annual O&M	Combined Annual Fee	SAVINGS Electricity kW	Electricity kWh	Natural Gas Therms	Water Kgal	Sewer Kgal	COST SAVINGS Elec Cost Savings	Gas Cost Savings	Water Cost Savings	Sewer Cost Savings	Utility Savings	O&M Savings
1	**Co-Gen System Optimization**	$ -															
1a	Co-Gen Optimization w/ Exh HR (stand alone)	$ -	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
1b	Co-Gen Optimization w/ Exh HR (interacted)	$ 1,260,606	$ 160,937	$ 6,006	$ 86,263	$ 92,269	0	6,606,657	(438,530)	0	0	$478,652	-$317,715	$0	$0	$ 160,937	$ -
2	**HTHW System Efficiency Improvements**																
2a	HTHW Boiler New Controls	$ 101,595	$ 21,033	$ 785	$ -	$ 785	0	0	29,031	0	0	$0	$21,033	$0	$0	$ 21,033	$ -
2b	HTHW Pump VFDs	$ -	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
2c	Pump Seal Cooling Water Recirc	$ 94,199	$ 8,269	$ 309	$ -	$ 309	(14)	(16,556)	0	2,628	2,628	-$1,278	$0	$5,168	$4,379	$ 8,269	$ -
2d	HTHW Pipe Insulation	$ 71,280	$ 7,694	$ 288	$ -	$ 288	0	0	10,620	0	0	$0	$7,694	$0	$0	$ 7,694	$ -
3	**Chiller Plant System Improvements**	$ -	$ -														
3a	Chiller Compressor VFD	$ 541,353	$ 24,378	$ 910	$ -	$ 910	1,057	253,424	0	0	0	$24,378	$0	$0	$0	$ 24,378	$ -
3b	Chiller Visor Controls	$ 94,983	$ 3,790	$ 141	$ -	$ 141	40	49,163	0	0	0	$3,790	$0	$0	$0	$ 3,790	$ -
3c	CHW Distribution System Improvements	$ -	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
3d	New CW Pumps & Filtration System	$ 306,270	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
4	**Lighting Efficiency Upgrades**	$ 1,640,293	$ 145,485	$ 4,848	$ -	$ 4,848	5,343	1,555,317	(18,321)	0	0	$143,097	-$13,273	$0	$0	$ 129,824	$ 15,661
5	**Water Efficiency Upgrades**	$ 482,474	$ 30,826	$ 1,076	$ -	$ 1,076	0	0	606	8,365	8,365	$0	$438	$16,450	$13,938	$ 30,826	$ -
6	**Control System Upgrades - INET**	$ 2,281,144	$ 164,576	$ 5,951	$ -	$ 5,951	217	1,305,910	87,752	0	0	$95,850	$63,576	$0	$0	$ 159,426	$ 5,150
7	**HVAC System Efficiency Improvements**																
7a	D-1 Unit HW Coil & VFD	$ 95,599	$ 8,536	$ 319	$ -	$ 319	85	68,233	4,291	0	0	$5,427	$3,109	$0	$0	$ 8,536	$ -
7b	VAV at LWH	$ 978,767	$ 30,560	$ 1,140	$ -	$ 1,140	805	314,887	4,367	0	0	$27,396	$3,164	$0	$0	$ 30,560	$ -
7b'	VAV at LWH (VFD Only)	$ 129,183	$ 23,715	$ 885	$ -	$ 885	633	244,515	3,309	0	0	$21,318	$2,397	$0	$0	$ 23,715	$ -
7c	VAV at Library	$ 619,833	$ 54,685	$ 2,041	$ -	$ 2,041	1,449	596,198	4,475	0	0	$51,443	$3,242	$0	$0	$ 54,685	$ -
7c'	VAV at Library (VFD Only)	$ 153,462	$ 40,916	$ 1,528	$ -	$ 1,528	1,128	468,301	783	0	0	$40,349	$567	$0	$0	$ 40,916	$ -
7d	Pool Pump VFD	$ 46,167	$ 7,592	$ 284	$ -	$ 284	130	94,570	0	0	0	$7,592	$0	$0	$0	$ 7,592	$ -
7f	Kitchen Hood Controls	$ 60,798	$ 7,919	$ 295	$ -	$ 295	0	57,237	5,207	0	0	$4,147	$3,772	$0	$0	$ 7,919	$ -
8	**HVAC System Infrastructure Upgrades (New**																
8a	New AHU (Incl VAV) at Blg E	$ 879,584	$ 9,822	$ 366	$ -	$ 366	352	105,543	236	0	0	$9,651	$171	$0	$0	$ 9,822	$ -
8b	New Induction Units at LWH	$ 923,967	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
8c	New HW H/EX at Science	$ 74,372	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
9	**Window Upgrades**	$ 902,489	$ 2,525	$ 94	$ -	$ 94	18	10,579	2,287	0	0	$868	$1,657	$0	$0	$ 2,525	$ -
10	**Renewable Initiatives**	$ 264,893	$ 1,851	$ 69	$ -	$ 69	(7)	(5,200)	3,131	0	0	-$417	$2,268	$0	$0	$ 1,851	$ -
11	**CCICS Efficiency and Infrastructure Upgrades**																
11a	New Heating Boilers	$ 353,236	$ 4,380	$ 164	$ -	$ 164	0	0	6,046	0	0	$0	$4,380	$0	$0	$ 4,380	$ -
11b	Tower Fan VFD	$ 16,756	$ 376	$ -	$ -	$ -	13	4,162	0	0	0	$376	$0	$0	$0	$ 376	$ -
11c	New DW Pump Package	$ 69,497	$ -	$ -	$ -	$ -	0	0	0	0	0	$0	$0	$0	$0	$ -	$ -
	TOTAL	**$ 12,442,796**	**$ 759,865**	**$ 27,499**	**$ 86,263**	**$ 113,762**	**11,249**	**11,712,940**	**-294,710**	**10,993**	**10,993**	**$912,639**	**-$213,520**	**$21,618**	**$18,317**	**$ 739,054**	**$ 20,811**

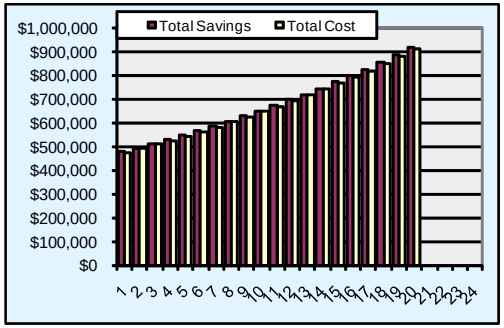
Northeastern Illinois University
20 Year Option

CASH FLOW

12 Arrears
3.50% Escalation

Year	Utility Savings	O&M Savings	Other Savings	Total Savings	Lease Payments	M&V Service	O&M Service	Other Annual Cost	Other Annual Cost	Total Cost	Net Cash Flow
1	$ 457,481	$ 20,811	$ -	**$ 478,292**	$ 457,523	$ 17,515	$ -	$ -	$ -	**$ 475,038**	**$ 3,254**
2	$ 473,493	$ 21,435	$ -	**$ 494,928**	$ 473,520	$ 18,041	$ -	$ -	$ -	**$ 491,561**	**$ 3,367**
3	$ 490,066	$ 22,079	$ -	**$ 512,145**	$ 490,078	$ 18,582	$ -	$ -	$ -	**$ 508,660**	**$ 3,485**
4	$ 507,216	$ 22,741	$ -	**$ 529,957**	$ 507,211	$ 19,139	$ -	$ -	$ -	**$ 526,350**	**$ 3,607**
5	$ 524,970	$ 23,423	$ -	**$ 548,393**	$ 524,946	$ 19,713	$ -	$ -	$ -	**$ 544,660**	**$ 3,733**
6	$ 543,344	$ 24,126	$ -	**$ 567,470**	$ 543,301	$ 20,305	$ -	$ -	$ -	**$ 563,606**	**$ 3,864**
7	$ 562,360	$ 24,850	$ -	**$ 587,210**	$ 562,297	$ 20,914	$ -	$ -	$ -	**$ 583,211**	**$ 3,999**
8	$ 582,045	$ 25,595	$ -	**$ 607,640**	$ 581,960	$ 21,541	$ -	$ -	$ -	**$ 603,501**	**$ 4,139**
9	$ 602,416	$ 26,363	$ -	**$ 628,779**	$ 602,308	$ 22,188	$ -	$ -	$ -	**$ 624,496**	**$ 4,283**
10	$ 623,500	$ 27,154	$ -	**$ 650,654**	$ 623,368	$ 22,853	$ -	$ -	$ -	**$ 646,221**	**$ 4,433**
11	$ 645,322	$ 27,968	$ -	**$ 673,290**	$ 645,163	$ 23,539	$ -	$ -	$ -	**$ 668,702**	**$ 4,588**
12	$ 667,909	$ 28,807	$ -	**$ 696,716**	$ 667,722	$ 24,245	$ -	$ -	$ -	**$ 691,968**	**$ 4,748**
13	$ 691,285	$ 29,672	$ -	**$ 720,957**	$ 691,070	$ 24,972	$ -	$ -	$ -	**$ 716,043**	**$ 4,914**
14	$ 715,480	$ 30,562	$ -	**$ 746,042**	$ 715,234	$ 25,722	$ -	$ -	$ -	**$ 740,956**	**$ 5,086**
15	$ 740,523	$ 31,479	$ -	**$ 772,002**	$ 740,245	$ 26,493	$ -	$ -	$ -	**$ 766,738**	**$ 5,264**
16	$ 766,440	$ 32,423	$ -	**$ 798,863**	$ 766,127	$ 27,288	$ -	$ -	$ -	**$ 793,415**	**$ 5,448**
17	$ 793,264	$ 33,396	$ -	**$ 826,660**	$ 792,915	$ 28,107	$ -	$ -	$ -	**$ 821,021**	**$ 5,639**
18	$ 821,029	$ 34,398	$ -	**$ 855,427**	$ 820,641	$ 28,950	$ -	$ -	$ -	**$ 849,591**	**$ 5,836**
19	$ 849,766	$ 35,430	$ -	**$ 885,196**	$ 849,338	$ 29,818	$ -	$ -	$ -	**$ 879,156**	**$ 6,040**
20	$ 879,508	$ 36,492	$ -	**$ 916,000**	$ 879,036	$ 30,713	$ -	$ -	$ -	**$ 909,749**	**$ 6,251**
21	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
22	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
23	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
24	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
TOTAL	**$ 12,937,417**	**$ 559,204**	**$ -**	**$ 13,496,621**	**$ 12,934,003**	**$ 470,639**	**$ -**	**$ -**	**$ -**	**$ 13,404,642**	**$ 91,979**

Project Turnkey Price:	**$**	**7,451,100**
Other Cost:	**$**	**-**
Customer's Capital Contribution (Avoided Cost):	**$**	**-**
Potential Rebates	**$**	**291,000**
Other Cost:	**$**	**-**
Capitalized Construction Interest:	**$**	**556,456**
Total Lease Balance when Repayment Commences:	**$**	**7,716,556**
Finance Rate:		**5.00%**
Effective Savings Escalation Rate:		**3.30%**
NPV of Cash Flow		**$54,226** [at 5.0%]



The following table illustrates the cost and savings for the 20 year term program and each proposed Energy Conservation Measure (ECM) individually, as well as, the total project amount.

Detailed ECM descriptions are contained in the "Energy Conservation Measures" Section of this document.

Northeastern Illinois University
20 Year Term

ECM	Price	Savings	Simple Payback	Annual M&V	Electricity		Natural Gas	Water	Sewer
					kW	kWh	Therms	Kgal	Kgal
HTHW System Efficiency Improvements									
HTHW Boiler New Controls	$ 101,595	$ 21,033	4.8 Yrs	$ 785	0	0	29,031	0	0
HTHW Pipe Insulation	$ 71,280	$ 7,694	9.3 Yrs	$ 288	0	0	10,620	0	0
Chiller Plant System Improvements									
New CW Pumps & Filtration System	$ 306,270	$ -	--	$ -	0	0	0	0	0
Lighting Efficiency Upgrades	$ 1,640,293	$ 145,485	11.3 Yrs	$ 4,848	5,343	1,555,317	(18,321)	0	0
Water Efficiency Upgrades	$ 482,474	$ 30,826	15.7 Yrs	$ 1,076	0	0	606	8,365	8,365
Control System Upgrades - INET	$ 2,281,144	$ 164,576	13.9 Yrs	$ 5,951	217	1,305,910	87,752	0	0
HVAC System Efficiency Improvements									
D-1 Unit HW Coil & VFD	$ 95,599	$ 8,536	11.2 Yrs	$ 319	85	68,233	4,291	0	0
VAV at LWH (VFD Only)	$ 129,183	$ 23,715	5.4 Yrs	$ 885	633	244,515	3,309	0	0
VAV at Library	$ 619,833	$ 54,685	11.3 Yrs	$ 2,041	1,449	596,198	4,475	0	0
Pool Pump VFD	$ 46,167	$ 7,592	6.1 Yrs	$ 284	130	94,570	0	0	0
Kitchen Hood Controls	$ 60,798	$ 7,919	7.7 Yrs	$ 295	0	57,237	5,207	0	0
HVAC System Infrastructure Upgrades (New Equip)									
New Induction Units at LWH	$ 923,967	$ -	--	$ -	0	0	0	0	0
New HW H/EX at Science	$ 74,372	$ -	--	$ -	0	0	0	0	0
Renewable Initiatives	$ 264,893	$ 1,851	143.1 Yrs	$ 69	(7)	(5,200)	3,131	0	0
CCICS Efficiency and Infrastructure Upgrades									
New Heating Boilers	$ 353,236	$ 4,380	80.6 Yrs	$ 164	0	0	6,046	0	0
TOTAL	**$ 7,451,100**	**$ 478,292**	**15.6 Years**	**$ 17,005**	**7,850**	**3,916,780**	**136,147**	**8,365**	**8,365**

Northeastern Illinois University
16 Year Term

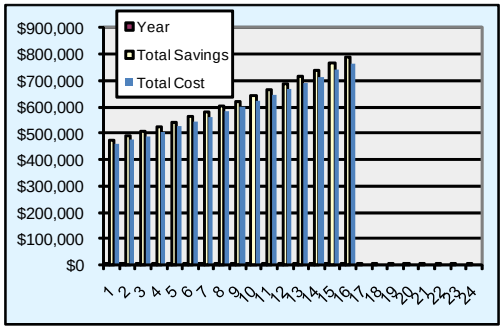
CASH FLOW

12 Arrears
3.50% Escalation

Year	Utility Savings	O&M Savings	Other Savings	Total Savings	Lease Payments	M&V Service	O&M Service	Other Annual Cost	Other Annual Cost	Total Cost	Net Cash Flow
1	$ 453,101	$ 20,811	$ -	**$ 473,912**	$ 441,152	$ 17,346	$ -	$ -	$ -	**$ 458,498**	**$ 15,414**
2	$ 468,960	$ 21,435	$ -	**$ 490,395**	$ 456,576	$ 17,867	$ -	$ -	$ -	**$ 474,442**	**$ 15,953**
3	$ 485,374	$ 22,079	$ -	**$ 507,453**	$ 472,540	$ 18,403	$ -	$ -	$ -	**$ 490,943**	**$ 16,510**
4	$ 502,360	$ 22,741	$ -	**$ 525,101**	$ 489,059	$ 18,955	$ -	$ -	$ -	**$ 508,013**	**$ 17,088**
5	$ 519,944	$ 23,423	$ -	**$ 543,367**	$ 506,159	$ 19,523	$ -	$ -	$ -	**$ 525,682**	**$ 17,685**
6	$ 538,142	$ 24,126	$ -	**$ 562,268**	$ 523,856	$ 20,109	$ -	$ -	$ -	**$ 543,965**	**$ 18,303**
7	$ 556,976	$ 24,850	$ -	**$ 581,826**	$ 542,170	$ 20,712	$ -	$ -	$ -	**$ 562,883**	**$ 18,943**
8	$ 576,472	$ 25,595	$ -	**$ 602,067**	$ 561,128	$ 21,334	$ -	$ -	$ -	**$ 582,461**	**$ 19,606**
9	$ 596,648	$ 26,363	$ -	**$ 623,011**	$ 580,746	$ 21,974	$ -	$ -	$ -	**$ 602,720**	**$ 20,291**
10	$ 617,530	$ 27,154	$ -	**$ 644,684**	$ 601,051	$ 22,633	$ -	$ -	$ -	**$ 623,684**	**$ 21,001**
11	$ 639,143	$ 27,968	$ -	**$ 667,111**	$ 622,064	$ 23,312	$ -	$ -	$ -	**$ 645,376**	**$ 21,735**
12	$ 661,514	$ 28,807	$ -	**$ 690,321**	$ 643,815	$ 24,011	$ -	$ -	$ -	**$ 667,826**	**$ 22,495**
13	$ 684,666	$ 29,672	$ -	**$ 714,338**	$ 666,325	$ 24,732	$ -	$ -	$ -	**$ 691,057**	**$ 23,281**
14	$ 708,630	$ 30,562	$ -	**$ 739,192**	$ 689,623	$ 25,474	$ -	$ -	$ -	**$ 715,097**	**$ 24,095**
15	$ 733,433	$ 31,479	$ -	**$ 764,912**	$ 713,736	$ 26,238	$ -	$ -	$ -	**$ 739,974**	**$ 24,938**
16	$ 759,102	$ 32,423	$ -	**$ 791,525**	$ 738,690	$ 27,025	$ -	$ -	$ -	**$ 765,715**	**$ 25,810**
17	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
18	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
19	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
20	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
21	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
22	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
23	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
24	$ -	$ -	$ -	**$ -**	$ -	$ -	$ -	$ -	$ -	**$ -**	**$ -**
TOTAL	**$ 9,501,995**	**$ 419,488**	**$ -**	**$ 9,921,483**	**$ 9,248,690**	**$ 349,646**	**$ -**	**$ -**	**$ -**	**$ 9,598,336**	**$ 323,147**

Project Turnkey Price:	**$ 6,099,526**
Other Cost:	**$ -**
Customer's Capital Contribution (Avoided Cost):	**$ -**
Potential Rebates	**$ 291,000**
Other Cost:	**$ -**
Capitalized Construction Interest:	**$ 322,616**
Total Lease Balance when Repayment Commences:	**$ 6,131,141**
Finance Rate:	**5.00%**
Effective Savings Escalation Rate:	**3.26%**

NPV of Cash Flow **$211,259** [at 5.0%]



The following table illustrates the cost and savings for the 16 year term program and each proposed Energy Conservation Measure (ECM) individually, as well as, the total project amount.

Detailed ECM descriptions are contained in the "Energy Conservation Measures" Section of this document.

Northeastern Illinois University
16 Year Term

ECM	Price	Savings	Simple Payback	Annual M&V	Electricity		Natural Gas	Water	Sewer
					kW	kWh	Therms	Kgal	Kgal
HTHW System Efficiency Improvements									
HTHW Boiler New Controls	$ 101,595	$ 21,033	4.8 Yrs	$ 785	0	0	29,031	0	0
HTHW Pipe Insulation	$ 71,280	$ 7,694	9.3 Yrs	$ 288	0	0	10,620	0	0
New CW Pumps & Filtration System	$ 306,270	$ -	--	$ -	0	0	0	0	0
Lighting Efficiency Upgrades	$ 1,640,293	$145,485	11.3 Yrs	$ 4,848	5,343	1,555,317	(18,321)	0	0
Water Efficiency Upgrades	$ 482,474	$ 30,826	15.7 Yrs	$ 1,076	0	0	606	8,365	8,365
Control System Upgrades - INET	$ 2,281,144	$164,576	13.9 Yrs	$ 5,951	217	1,305,910	87,752	0	0
D-1 Unit HW Coil & VFD	$ 95,599	$ 8,536	11.2 Yrs	$ 319	85	68,233	4,291	0	0
VAV at LWH (VFD Only)	$ 129,183	$ 23,715	5.4 Yrs	$ 885	633	244,515	3,309	0	0
VAV at Library	$ 619,833	$ 54,685	11.3 Yrs	$ 2,041	1,449	596,198	4,475	0	0
Pool Pump VFD	$ 46,167	$ 7,592	6.1 Yrs	$ 284	130	94,570	0	0	0
Kitchen Hood Controls	$ 60,798	$ 7,919	7.7 Yrs	$ 295	0	57,237	5,207	0	0
Renewable Initiatives	$ 264,893	$ 1,851	143.1 Yrs	$ 69	(7)	(5,200)	3,131	0	0
TOTAL	**$ 6,099,526**	**$473,912**	**12.9 Yrs**	**$ 16,841**	**7,850**	**3,916,780**	**130,101**	**8,365**	**8,365**

The following table is an estimate of costs and fees associated with the 20 Year Term project. These costs and fees will vary once the final scope of work is determined.

Cost and Fee Estimates

Category	Costs	% of Total
Engineering / Design	$ 482,071	6.5%
Contractor/Vendor Estimates	$ 4,692,376	63.0%
Construction Management	$ 517,099	6.9%
Commissioning	$ 70,905	1.0%
Permit	$ -	0.0%
Bond Costs	$ 155,146	2.1%
Overhead and Profit	$ 1,358,882	18.2%
Maintenance	$ -	0.0%
Measurement & Monitoring	$ 59,133	0.8%
Training	$ 6,000	0.1%
Other	$ 109,488	1.5%
	$ 7,451,100	**100%**

6. IMPLEMENTATION PLAN

OVERVIEW

NORESCO has spent a good deal of time coordinating the potential implementation plan with NEIU. For example, together we have agreed to parking arrangements for contractors, on-site storage of materials using pods, a location for our team to work on-site using the old Security Building, behind Building H as well as scheduling issues surrounding classes and faculty. All together we are confident our construction schedule contained herein is complete and comprehensive. The schedule we illustrate herein includes the complete list of ECMs identified, less the Co-Gen measure but will be altered based on the final mix of ECMs chosen by NEIU. Also, the schedule takes into account the seasonality component of the associated ECM's.

NORESCO's Project Manager (PM), Ray Smudde, will manage the project schedule and oversee installation subcontractors through use of rigorous Quality Control Procedures. The following outlines our project implementation process:

- A site safety and health plan will be developed for the project by our project manager and in-house safety coordinator. The project manager will conduct ongoing safety reviews throughout project construction, inspecting subcontractors for consistent compliance with OSHA regulations. All NORESCO project managers receive mandatory OSHA 10-hour training on an annual basis.
- Insurance certificates will be produced demonstrating that all coverage is in place, meeting or exceeding the customer's required coverage limits.
- Materials are procured by NORESCO to leverage the purchasing power afforded us through our position as the most experienced product-independent energy services company in the United States.
- While we work closely with our customers to accommodate any particular preferences they may have with respect to material and labor, we generally secure material and labor through competitive procurement processes and have stringent vendor and subcontractor qualification requirements.
- Project Managers track all material and labor on a daily and weekly basis and report project progress to NORESCO Management via Percent Complete Reporting. This same information is used for accounting and invoicing.
- NORESCO and its subcontractors carefully schedule and track the performance of projects based on the critical path method so that timely purchase and delivery of material and equipment is ensured and adequate manpower and resources are available as needed. Effective communication with the customer and careful scheduling help eliminate costly delays.
- Progress meetings are convened at least weekly, and more frequently if necessary, both within the NORESCO team and with the facility staff in order to manage properly and keep all interested parties informed of critical dates.

- Invoices are processed in accordance with Generally Accepted Accounting Principles and internal controls, and project accounting is supported by a state-of-the-art accounting system designed specifically for the construction and engineering industry.
- The Project Manager develops and maintains a contract compliance matrix that facilitates quick reference of all compliance items and includes them in the project schedule. Our Project Managers are also supported by an in-house legal team that effectively and efficiently assists with development of solicitations for goods and services and the resulting subcontracts. The legal group also provides quality assurance reviews to ensure that all customer contract requirements flow down to subcontractors, thus avoiding the cost of delays that result from contract compliance issues.

PROJECT MANAGEMENT

The PM will schedule all project meetings including an initial kick off meeting with the University personnel. During the kick off meeting NORESCO recommends that NEIU and NORESCO personnel review the project objectives, timelines and obligations of each party to ensure the project success. Specific discussion items for the kick off meeting include, but are not limited to:

- Review of the Scope of Work and Preliminary Project Schedule
- Project contact information for customer, NORESCO and any subcontractors
- Security issues, access to all areas included in scope of work.
- Work hours for site personnel and contractor staff.
- Site Safety Plan
- Customer requirements for all subcontracting personnel accessing the Northeastern Illinois University campus
- Hazardous areas in the facility
- A plan to handle hazardous materials that may be affected.
- Required permits (confined space, Hot work, local building, electrical etc.)
- Customer concerns, NORESCO concerns
- Anticipated project impacts during construction (what can you expect)
- Staging areas, trailers, material storage, lockable space.
- Discussion of any unique site specific requirements such as keeping dumpsters off of sidewalks to avoid damage because steam and/or condensate piping is immediately underneath.

Once all ECM designs and specifications have been developed, presented to University staff, and received final approval, the Project Manager will then begin the implementation of the project in a collaborative effort with the site personnel. Project management procedures employed by NORESCO minimally include the following:

- PM directs the subcontractors work schedules based on coordination meetings with customer.
- PM requires sub-contractor(s) to submit status reports (daily, weekly).

- PM conducts weekly construction meetings unless directed otherwise by University personnel. Updates include work completed and schedule "look aheads" to keep the customer informed of the next affected areas.
- PM generates Meeting Minutes from the weekly construction meeting and distributes electronically to University Project Team. In order for these minutes to become accepted by the team, NORESCO requests a positive response from a State representative within 5 business days of transmittal unlike the standard practice which is to accept no response as acceptance as fact.
- PM schedules informal kick-off meetings with a representative for each affected building and coordinates future work with this individual as the "primary point of contact" for that facility.
- PM requires all NORESCO and sub-contractor personnel to wear identification badges, or other required form of identification, when on the building premises.
- PM tracks all material and labor on a daily and weekly basis and reports project progress to NORESCO Management via Percent Complete Reporting this same information is used for accounting and invoicing the customer.
- PM inspects work during site visits and reviews work with contractor. All deficiencies and punch list items are noted at this time. As soon as practical following these walk-throughs a timeline is established and provided to the customer for completion of open items.
- PM documents all changes to the work and receives appropriate approvals before initiating any changes to the scope of work.
- PM red lines documents and generates the project "As-Builts", which are provided to the customer in the project turnover package.
- PM coordinates all commissioning and initiates training procedures.
- PM oversees the preparation of all O&M documentation.

All punch list issues will be resolved prior to final acceptance of the project by site staff. Completed as-built drawing, O&M manuals, and any other pertinent documents will be submitted and approved as part of the commissioning and turnover. Temporary facilities established at the site will be removed, and all aspects of the facility restored to their original condition.

SCHEDULING

NORESCO and its subcontractors carefully schedule and track the performance of projects so that timely purchase and delivery of material and equipment is ensured and adequate manpower and resources are available as needed. The software utilized for project scheduling will include Microsoft Project, as well as self-developed databases and spreadsheets. All project related documentation and correspondence is maintained and organized in a standardized fashion within a "job folder" housed on our network. NORESCO's Project Managers will also rely on our real-time project cost management database to ensure the project remains on-time and on-budget.

Key milestones, such as obtaining permits and host facility approvals, are given equal weight to the more labor intensive tasks, since they can impact the overall project duration. Scheduling and frequent auditing for compliance with the anticipated project construction plan is a major focus of the NORESCO construction management staff. Deviations from the schedule are quickly detected and swift corrective action taken as necessary to restore the schedule. The careful attention to scheduling allows for anticipation of delays and development of a work around plan to minimization of their effects. The project scheduling documentation is readily available to MBRES and University staff for auditing, review and comment as frequently as necessary for your comfort.

Along with general project scheduling, NORESCO and its subcontractors are able to make maximum use of the scheduling process to generate:

- Projected drawing schedules
- Manpower utilization schedules
- "Value earned" profiles for establishment of percent completion payments
- Purchasing schedules
- Design schedules
- Submittal/approval schedules
- Testing, balancing, and commissioning schedules
- Maintenance schedules

The sequence and timing of subcontractor efforts is carefully tracked, especially when there is interdependence between trades. The construction site manager or his assignee will keep daily logs of personnel on site, changes or directions issued, and construction activity completed.

NORESCO knows from experience how critical timing is to the successful completion of an ESPC. Our construction management process therefore incorporates careful tracking of the following time-related elements:

- Subcontractor pre-qualification process is completed prior to final design to allow them maximum input into the design and construction process and fully integrate their skills and experience with the other team members early on.
- Project management techniques are used to track purchase and delivery of materials and key milestones such as obtaining permits and host facility approvals. They also ensure that adequate manpower and resources are available when they are needed.
- Sequence and timing of subcontractor efforts are carefully tracked, especially when there is interdependence between trades.
- A flowchart is developed early on, defining the relationships between the parties and identifying roles and responsibilities, communication channels, and sign-off or quality control authority of each team member.

- Progress meetings are convened on a regular basis, both within the NORESCO team and with the facility in order to manage properly and keep all interested parties informed of critical dates.
- A commissioning plan is reviewed with all subcontractors before construction is underway so they know what will be required of them regarding start-up, performance testing, training, and documentation. Commissioning can then proceed smoothly and in parallel with construction activities, without causing delays.

Refer to the preliminary project schedule for the proposed project at the end of this section.

COMMISSIONING OVERVIEW

The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) describes commissioning as the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained to perform in conformity with the design intent of a project. This definition has been widely adopted as an industry benchmark and is included in all current guidelines published by the Department of Energy (DOE), United States Green Building Council (USGBC) and Federal Energy Management Program (FEMP).

NORESCO initiates the development of a commissioning plan during the first stages of an Energy Performance Contract (EPC) project so that it can be integrated into the processes for design, construction, startup, functional testing, training, acceptance, and measurement and verification (M&V). As part of our effort to meet project performance guarantees, NORESCO will focus commissioning efforts on the planned project goals. The NORESCO Commissioning Agent will work with project team members to ensure that there is a written summary of these goals to serve as a Design Intent Document that can be used to drive the commissioning process.

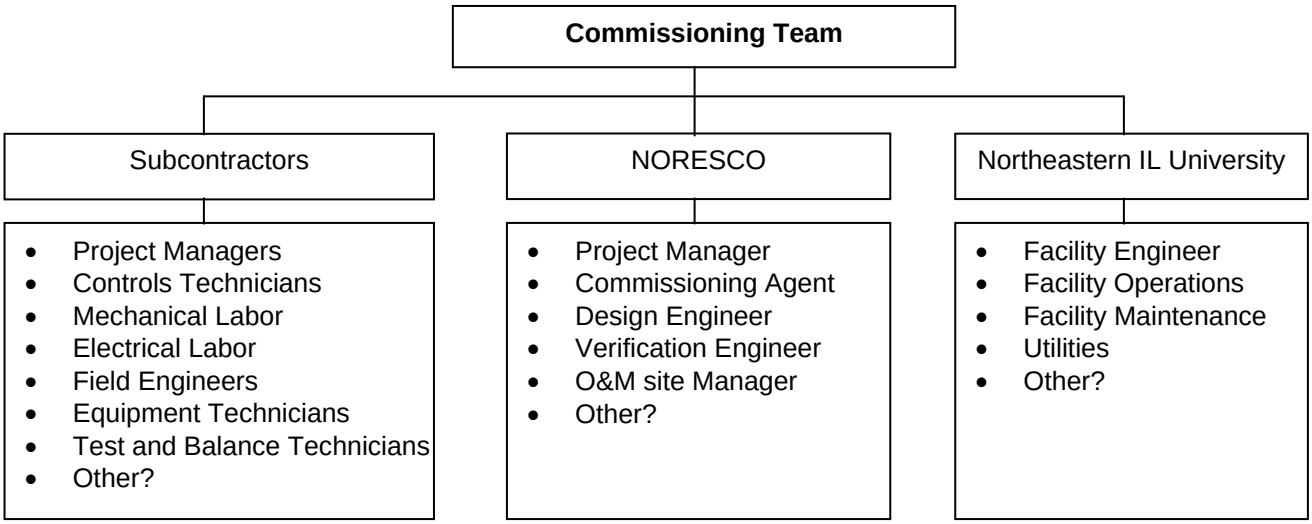
COMMISSIONING APPROACH

The approach that NORESCO uses for commissioning is an extension of our site management approach. It is based on a project team organization that requires the input of all functional areas of the team. The Commissioning Team, led by the Commissioning Agent, will consist of NORESCO project implementation staff, University project staff, and members of each relevant construction discipline. Manufacturer's representatives and subcontractors will also be included in the team to assist in performing certain specialized startup and testing procedures.

Key customer personnel, such as the Owner's Technical Representative, Facility Engineers and Technical personnel, and building Operations & Facilities staff, will be an integral part of the Commissioning Team. NORESCO includes these customer personnel to coordinate activities with building operations, serve as resources in solving technical issues, review site-specific startup procedures, leverage commissioning efforts for training purposes, and witness tests. It is beneficial for supervisors and operational personnel to participate in commissioning activities, as they provide an ideal opportunity to become familiar with how the equipment included in the

project should be operated to meet the design intent. As a result, facility personnel will be more likely to utilize the operational features of installed equipment to their fullest.

The following organizational chart is intended to serve as a preliminary guide to outline the parties who will be included in the University EPC Project Commissioning Team. Actual team members will be selected based on final design, equipment, and vendor selections.

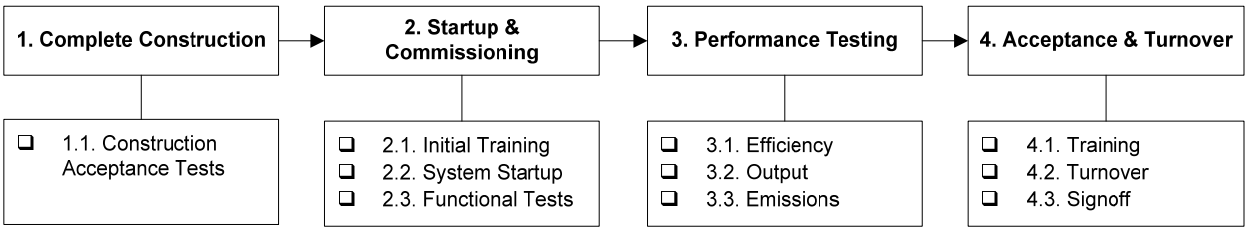


Physical testing and documentation of commissioning tasks for the University project will be a joint effort between the Commissioning Team and the Construction Team. Subcontractors and equipment vendors are issued detailed specifications and are held accountable for the commissioning of equipment and systems included in their scopes. NORESCO construction and commissioning personnel will coordinate the activities of these supporting contractors and vendors. All testing and commissioning will be directly supervised and verified by NORESCO's professional staff.

COMMISSIONING PROCESS

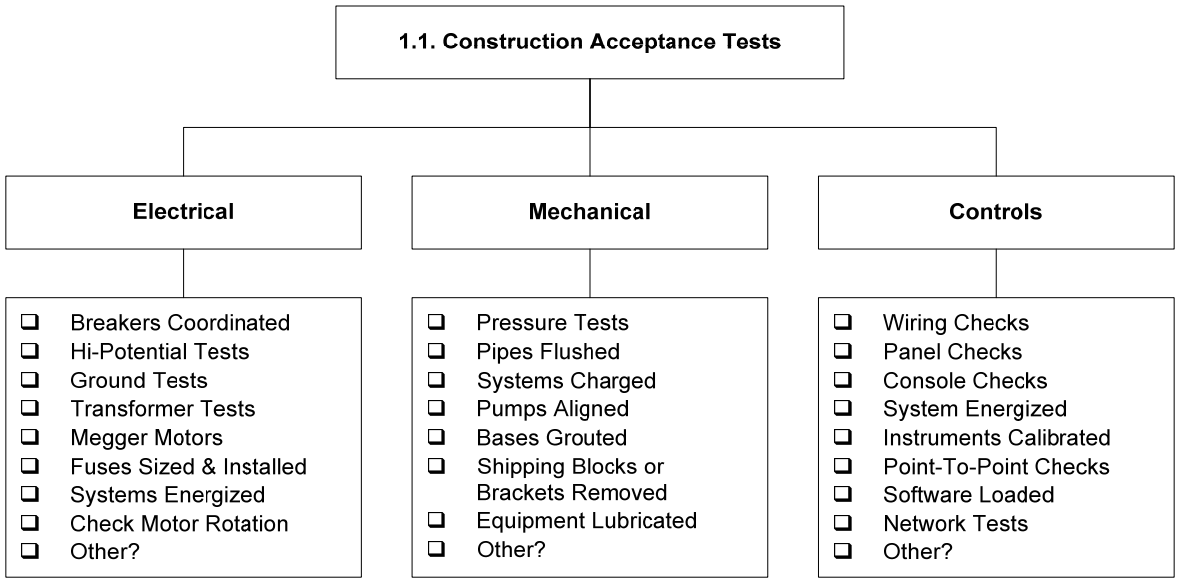
The following flowcharts are intended to serve as a guide to outline the type of commissioning process NORESCO will implement at the University project. Each of these charts is meant to be a simplified example of how most systems will be commissioned. Given the range of systems and energy conservation measures (ECMs) involved at the University, as well as the preliminary nature of the design, it is expected that these may be revised during the final design stage.

Chart 1. Commissioning Process Flow – Per System



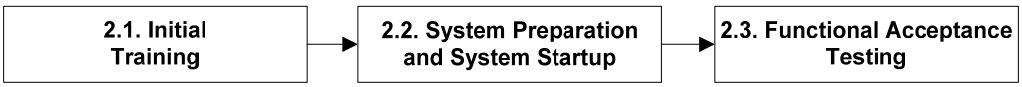
Systems will proceed through the commissioning process on individual schedules as they are ready for startup. Simple systems and ECMs will only require a subset of the tasks outlined above and will be brought on-line incrementally.

Chart 2. Construction Acceptance Tests



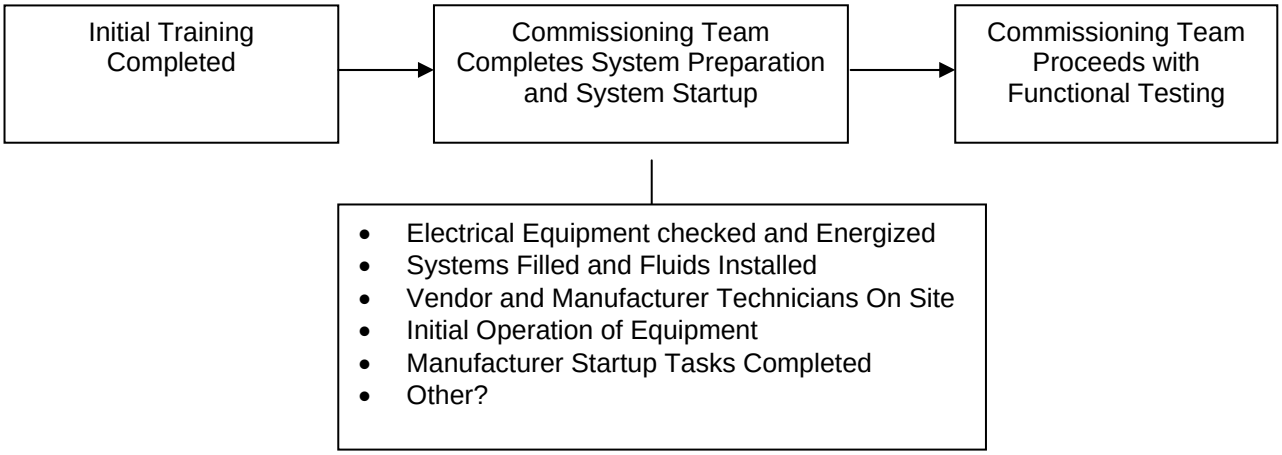
The construction acceptance tests outlined above are meant to be a representation of the majority of construction acceptance tests; this is not intended to be an all inclusive list. Many systems and ECMs will only require a subset of these tests, while other systems and equipment (Wireless Controls, Variable Frequency Drives, PV Inverters, etc.) will require additional measures.

Chart 3. Startup and Commissioning Phase – Per System



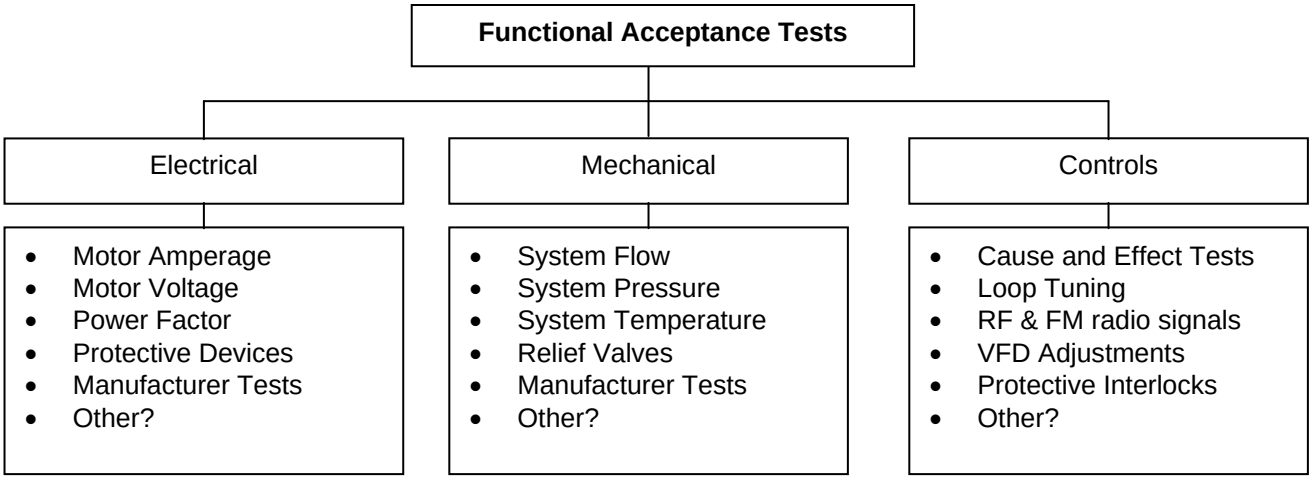
The startup and commissioning phase will require a great deal of coordination because ancillary systems will be required to operate larger integrated systems, and in many cases the ancillary systems cannot be fully tested until the integrated system is brought on-line. Coordination of these tasks will be outlined during daily communications between the NORESCO project staff and University personnel.

Chart 4. System Preparation and System Startup



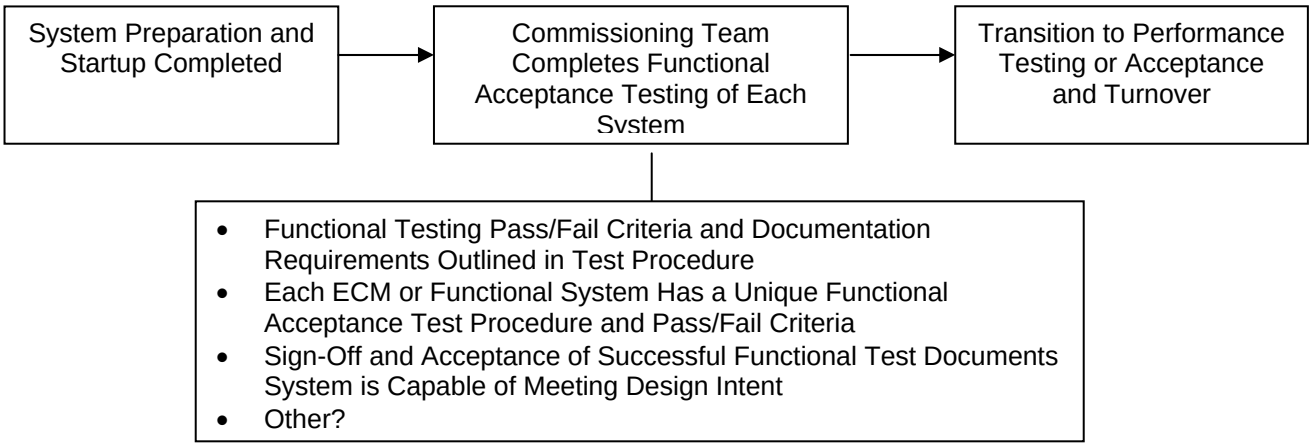
Preparation and startup will vary greatly from system to system. This list is meant to convey examples of the tasks that will be performed at the University during this phase. As site and equipment specific tasks are defined, they will be added to the project schedule and coordinated with University facilities staff.

Chart 5. Functional Acceptance Tests



The tests outlined above are meant to be a representation of different types of functional acceptance tests that may be required at University; this is not intended to be an all inclusive list. Many systems will only require a subset of these tests.

Chart 6. Functional Acceptance Testing



Functional acceptance testing will vary greatly for each of the ECMs and each of the systems within the ECMs. As required, actual tasks for each of the ECMs and systems (PV System, Clocks, Energy Management Controls System [EMCS], etc.) will be included in functional acceptance test forms generated for that specific ECM or system.

COMMISSIONING PLAN

The primary objective of the Commissioning Plan is to define how NORESCO will ensure that all individual pieces of equipment and integrated systems will perform in conformance with the design intent of the project. Although there are different approaches to commissioning, the fundamental process provides quality assurance to confirm that each of the following standards are met for all equipment included in the project:

1. The products and components selected and installed meet project design criteria.
2. Products and components are installed in accordance with the engineer's and manufacturer's recommendations and design criteria.
3. Products and components are capable of meeting their published performance criteria.
4. If the project includes a system of several products and components, the integrated system is installed in accordance with the engineer's design criteria.
5. If the project includes a system of several products and components, the integrated components are interacting in accordance with the engineer's design criteria.
6. All foreseeable items necessary for the components and systems to continue to operate as designed have been identified for inclusion in the Operations and Maintenance (O&M) Manuals.
7. The facility training plan includes all items that need to be discussed and reviewed with facility personnel in order for the project to continue to perform.

Detailed commissioning tasks and requirements for the equipment to be installed as part of the University project will be identified in commissioning specifications. These specifications are developed by NORESCO using an approach customized to the complexity of each piece of equipment and the technology involved. The Commissioning Team will use the specifications to coordinate individual commissioning tasks and ensure that appropriate commissioning test forms are generated and completed to cover all items requested.

COMMISSIONING PROCEDURES

Specific commissioning procedures vary depending on component technologies, equipment types, and applications involved. As final design is completed, equipment selections are confirmed, and control sequences are finalized, NORESCO will develop a site-specific Commissioning Plan for the University project to outline these procedures. Procedures for each piece of equipment will draw from each individual manufacturer's recommendations.

The following representative sections provide examples of the range and types of commissioning procedures for some of the major components included in the University project.

General Commissioning Items

1. Verify that each piece of equipment was manufactured, shipped, and installed with all options and features specified (operator workstation, control system interface, ground fault protection, thermal overload, automatic bypass, safety devices, etc.).
2. Provide a complete list of all equipment nameplate data, component manufacturer's software and firmware versions, and serial number(s). (This should include data for individual available pressure vessels, coils, and motor data.)
3. Document all dates, times, durations, operating conditions, and names of parties involved with any tests performed.
4. Each test form shall be reviewed and signed by the party with overall responsibility for the test, as well as a customer representative if it is identified as a test that must be witnessed.
5. Document the procedures, forms, and submissions required to initiate and maintain the manufacturer's warranty.
6. Provide written copies of all applicable O&M instructions.
7. Ensure that appropriate log books have been established using a factory recommended format to record all critical operating parameters during equipment operation.
8. Document that all equipment manufacturer recommended startup and check-out procedures have been completed by an authorized technician using manufacturer's forms.
9. List all rejected items, failed tests, abnormalities observed, or remedial action required by others that were not completely rectified during the construction punch list process.

10. Document all training provided with names and signatures of parties who received training.
11. Verify that adequate clearances exist around all components for cooling air and to provide access for routine service.
12. Review component locations to ensure that they are not subject to temperatures beyond the manufacturer's published operating limits.
13. Check that panels and enclosure locations are of the type specified and are not subject to excessive moisture, spray, or dirt.
14. Confirm that all fluid systems and system components (valves, sensors, radiators, coils, hoses, tanks, quick disconnects, etc.) are properly routed, supported, and free of leaks.
15. Ensure that all lubricants and fluids meet manufacturer requirements for the equipment installed and the anticipated operating conditions (arctic, tropical, etc.). Document that all special additives or conditioners have been added to the specified concentrations.
16. Provide copies of Material Safety Data Sheets (MSDS) for all applicable materials.
17. For exterior installations, confirm that enclosure penetrations are watertight and/or do not void weather rating.
18. Confirm that equipment, component, and device labels, tags, or signs have been installed per specifications.

Lighting Retrofit Commissioning

1. Confirm that all post-retrofit group light levels have been reduced or raised appropriately to meet IES standards.
2. Ensure that any non-permanent or disposable batteries have been installed and tested and all battery locations, types, and recommended replacement intervals have been documented.
3. Test emergency egress and exit lights for proper sequencing from normal to emergency mode on battery and/or emergency power as applicable.
4. Confirm that all battery condition pilot lights and test switches are fully functional.
5. Verify that new fixtures and/or existing fixture retrofit kits have been installed per specifications.
6. For exterior installations, ensure that enclosure penetrations are watertight and/or do not void weather rating.
7. Check operation of completed installation using available controls (wall switches, occupancy sensors, lighting panels, etc.) to confirm that they cycle on and off as intended.
8. During operation, check that all fixtures and ballasts are free of abnormal vibration or unusual noise.

9. Confirm that all required equipment, component, and device labels, tags, or signs have been installed per specifications.

Water Conservation Retrofit Commissioning

1. Check that fixtures and components are free of leaks and packing glands have been adjusted.
2. Ensure that finished surfaces are patched or repaired as outlined in project specifications.
3. During operation, check that all fixture components are free of abnormal vibration or unusual noises.
4. Verify adequate clearances exist for routine service of fixture.
5. Confirm all required equipment, component, and device labels, tags or signs have been installed per specifications.

Energy Management Control System Commissioning

1. Provide a troubleshooting logbook by the operator workstation for use by facility operators and control system technicians to document facility issues and contractor responses to ongoing fine-tuning.
2. Confirm that all sensor locations and inputs have been reviewed to ensure that readings are stable and accurately reflect the medium being measured (no stratification, excessive pulsations, system effects, etc.).
3. Document that all inputs, sensors, outputs, and transducers have been calibrated and that ranges match the medium being measured or devices to be controlled. Where applicable, ensure that current transformer magnetization and polarity tests have been completed per specifications.
4. Document that all flow control devices (valves, dampers, etc.) have been tested through full range of motion to ensure complete shutoff when closed, unrestricted flow when open, and smooth operation.
5. If applicable, verify that interface and monitoring of any OEM equipment (VFD, chiller control panel, burner management system, etc.) operating parameters, faults, or alarms have been completed and tested.
6. If applicable, document that remote monitoring of the control system through dial-up or Internet connection has been completed and tested with lists of all phone numbers, modem settings, IP addresses, passwords, etc.
7. Provide lists of all user defined system variables, including default or initial values (set point, schedule, reset, alarm, gain, etc.) to facilitate future modifications and fine-tuning.
8. Test all control sequences and software logic by completing functional performance tests that confirm system responses through cause and effect methods.

9. Collect and print trends for all dynamic control loops to demonstrate proper control (timely and smooth response, lack of hunting, close to set point, minimal overshoot, etc.) over each range of system loads (weather conditions, startup, shutdown, etc.) encountered during normal operation.
10. If applicable, review graphic screens to ensure that they accurately reflect all equipment and systems controlled. Include ranges for controlled devices, have sufficient transfers or links to quickly navigate through related subsystems, and include narrative explanation of any non-intuitive sequences.
11. If applicable, enable password protection of control system programming and confirm that the password matrix of access levels and privileges has been approved and implemented per customer requirements.
12. Confirm that all control system and equipment failure modes (power failure, sensor failure, signal or communication loss, etc.) and alarm responses have been reviewed with a customer representative to ensure that they meet facility standard operating procedures.
13. Confirm that all devices with clocks or calendar functions have been checked for proper dates and times and coordinated with local daylight savings time practices.
14. Confirm that all equipment subject to automatic start/stop control by the control system has been reviewed with a customer representative to ensure that equipment is properly labeled and life safety protection measures (horns, lights, etc.) are compatible with facility standard operating procedures.

DOCUMENTATION

As mentioned above, NORESCO will prepare a detailed Commissioning Plan for the University project. This plan will be prepared as soon as final design, equipment selections, and control sequences are completed. The Commissioning Plan will be prepared with input from major subcontractors and vendors and will outline the design intent, objectives, organization, schedule, documentation requirements, and testing procedures to be used.

After the Commissioning Plan has been drafted, NORESCO will schedule meetings with all appropriate commissioning team members to review the proposed plan and document all relevant corrections and clarifications.

Commissioning activities and milestones will be identified in the NORESCO construction schedule to communicate how systems will be brought on-line. As the project transitions from construction to startup, a brief outline of ongoing commissioning activities will be included in the agendas for regular job meetings and will be documented in the meeting minutes. During startup, detailed look-ahead schedules may be generated to coordinate commissioning tasks so that all appropriate Commissioning Team members can participate.

Actual commissioning test forms for the University project will include a mixture of NORESCO test forms, customized subcontractor test forms, and standard manufacturer installation and

startup checklists. Since the commissioning process ranges from simple static tests performed during construction (such as electrical Hi-Pot tests) to complex dynamic tests (such as control system functional performance testing), it is typically impractical to collect and submit each and every test form and checklist. The commissioning team will discuss each commissioning procedure and agree upon the forms and documents to be used to document it prior to the task being performed. Where requested, NORESCO will submit copies of the actual test forms that will be used to University personnel for review and approval.

Where appropriate for the technologies involved, commissioning forms may also include specialized electrical, thermal, or vibration studies performed by consultants. Customized test forms will be generated by NORESCO and subcontractors as needed to outline the procedures to be followed during testing of integrated systems or automated control sequences.

Upon completion of project commissioning, the NORESCO Commissioning Agent will perform a final quality control check of all commissioning documents and support the submission of project close out documents. The commissioning submittals will contain all relevant commissioning documentation collected during the project, such as completed checklists, test forms, startup sheets, balance reports, and acceptance forms. Descriptions of any abnormalities or unusual observations will also be included.

OPERATION, MAINTENANCE AND TRAINING OVERVIEW

NORESCO proposes that installed measures will be operated and maintained by University building engineering and facility management personnel in accordance with manufacturer recommendations and procedures. Since project savings performance depends on proper maintenance, NORESCO will establish and document a planned maintenance approach and provide training for facility personnel. Facility staff will likewise be required to document the completion of required preventive maintenance as a condition of the energy savings guarantee.

To meet this important objective, Mr. Smudde will provide or arrange for comprehensive instruction on the operation, troubleshooting, maintenance, and repair of equipment and systems modified or installed under each ECM. Training will be provided on-site using actual ECM equipment. For major equipment installed as part of ECM implementation, training may be provided through or supplemented with instructional sessions by the equipment vendors. Where appropriate, field training will be scheduled at the manufacturer's training facility. For example, some vendors will offer classroom training using mock-ups and computer simulation of the actual energy management control strategies that NORESCO installs. The advantages of training by experts in a controlled environment without interruptions can make this a worthwhile option.

Training sessions typically cover operating and maintenance requirements, emergency and emergency shut-down procedures, technical functions, and warranty provisions. Course materials will include as-built drawings, equipment specifications, and the operation and maintenance plans and manuals.

Maintenance manuals will be provided and will supply necessary component detail and illustration, indicating arrangements and locations. The manuals will clearly prescribe the manufacturer's recommended schedule for preventative maintenance, seasonal maintenance requirement, and expected frequencies of maintenance. Emergency repair procedures will also be included, as well as manufacturers' equipment specifications, service manuals, and parts lists.

All necessary installation data and documentation will be provided by the NORESCO Construction Team. The manuals will be bound and clearly marked, tabbed, and indexed. In addition, the Project Manager will develop and strategically deploy environmentally protected framed instructions with condensed operating and maintenance instructions and diagrams. Where applicable, documentation will be provided in an electronic format. This allows for on-site processing, queries, and incorporation into facility work order scheduling system as appropriate.

Instruction will include a classroom phase, conducted prior to completion of ECM installation, and a practical application phase, conducted after successful startup and testing. The O&M plans and manuals for each ECM, along with supplemental materials, will be used and instruction on their use provided.

The following table describes those ECMs that will require

Table 7.1 – Training

ECM Training	Description	Training Provided by
ECM 2d – HTHW Pipe Insulation ECM 4 – Lighting Upgrade ECM 5 – Water Conservation	1 to 2 hour on-site walk-through of installed systems, as well as warranty and replacement instruction.	Installation contractor and NORESCO PM
ECM 2a – Boiler Controls ECM 3 – Chiller Plant ECM 6 – Controls Systems ECM 7 – HVAC Efficiency	Two four-hour sessions will be provided for review of control points and sequences	
ECM 8 – HVAC Infrastructure ECM 10 – Renewable Initiatives ECM 11a – CCICS Boilers ECM 11c – CCICS DW Pumps	1 to 2 hour on-site walk-through of installed systems, as well as warranty and replacement instruction	NORESCO PM and Installation Subcontractor

7. MEASUREMENT AND VERIFICATION PLAN

MEASUREMENT AND VERIFICATION DESCRIPTIONS

The following tables outline the M&V procedure for each ECM. Each description lays out the procedure for the calculation of savings including the parameters used in the energy savings calculations. If the parameter is not identified in the specific M&V table, then it is assumed that the particular variable is stipulated during the pre and post retrofit calculations. Energy calculations are based on the following variables but are not limited to the following:

- Engineering calculations
- Customer provided operation schedules
- Manufacturer's published data
- Field verification of proper equipment operation

Table 7.1 summarizes the IPMVP M&V Options.

Table 7.1 - IPMVP Options for M&V

Option	Description	How Savings are Calculated
A	Retrofit Isolation: Key Parameter Measurement	Savings determined using spot or short-term measurements of key performance parameters before and after the retrofit, with other parameters estimated from baseline surveys or historical data.
B	Retrofit Isolation: All Parameter Measurement	Savings determined by short-term or continuous measurements of all parameters at the device or system level before and after the retrofit. Both performance and operations parameters are monitored.
C	Whole Facility Metering	Savings determined using whole facility metered energy used before and after the retrofit. Analysis of hourly or monthly metered energy use typically uses regression analysis to account for differences in weather and other operations parameters between the baseline and post-installation conditions. . Baseline adjustments determined based on detailed annual surveys, measurements, and monitoring.
D	Whole Facility Calibrated Simulation	Savings are determined using building energy simulation models (e.g., DOE 2, eQUEST, Energy Plus) calibrated against baseline and post-installation metered energy use. Baseline and post-installation measurements of key parameters are used to improve accuracy of model.

Table 7.2 summarizes the methodology per ECM.

Table 7.2 Summary of M&V Methodology

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #1 – Co-Gen System Optimization with new heat recovery						
Optimization of four existing engine generators with the addition of exhaust stack heat recovery	- Electrical Use - Natural Gas Use	Measure key parameters for engines including jacket temperatures and jacket water flow for all four engines Use manufacturer data for engine performance. Thermal efficiency was calculated using boiler combustion gas analysis, HTHW flows and temperatures. Exhaust gas flow and temperatures measured for each engine. Existing ICONICS instrumentation and trending used to collect 4160V load and engine parameters such as power output and temperatures. Runtime and operational thermal profile estimated from ICONICS trends, engine runtime hour meters, weather data and operator logs.	Monitor key performance indicators including temperature across a range of conditions on the heat recovery unit to demonstrate that control strategies have been implemented and are operating as expected. Performance of new heat recovery sequences, sensors and equipment will be verified during commissioning. Use manufacturer data for engine performance.	Monitor key performance indicators including temperature after commissioning and inspect annually to verify that ICONICS system is trending and the heat recovery unit is operating as intended	Weather, building heating and cooling loads, engine efficiency, occupancy	A

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #2 – HTHW System Efficiency Improvements						
HTHW System Optimization – HTHW Boiler Controls – HTHW pump Seal Cooling Water Upgrade – New Condenser HTHW Pipe Insulation	- Electrical Use - Electrical Demand - Natural Gas Use	Measure key parameters for pumps and boilers including differential pressures, flows, temperatures, combustion efficiency and power on a sample of 480V equipment. Use manufacturer data for boiler water flows and pump performance. Pipe insulation savings estimated using manufacturer data and estimated area based on site inspections. Runtime, loads and operational profile estimated from EMCS trends, logger data and operator logs.	Measure efficiency of boiler operating under new O2 trim controls after commissioning. Pipe insulation and pump seal savings estimated using manufacturer data. Verified savings based on the measured boiler combustion efficiency, use and the baseline operating profile.	Inspect annually to verify that ECMs are operating as intended. Work with central plant operations staff after commissioning to ensure that boiler energy use is optimized based on actual requirements.	Weather, building heating loads, occupancy	A for Boiler Controls Estimated for pump seals and pipe insulation

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #3 – Chiller Plant Efficiency Improvements						
Chilled Water System Optimization – Chiller Compressor VFD – New Condenser Water Pump(s)	- Electrical Use - Electric Demand	Measure key parameters for pumps and utilize manufacturers published efficiency data for chillers flows, temperatures and power on a sample of 480V equipment. Existing chiller performance based on field collected data including temperatures and flow. Existing instrumentation used to collect 4160V load and power values. Manufacturer data for chiller VFD used to determine savings Runtime and operational profile estimated from EMCS trends, logger data and operator logs.	Monitor key performance indicators including temperature across a range of conditions on the Chiller to demonstrate that control strategies have been implemented and are operating as expected. Performance of new chiller VFD sequences, sensors and equipment will be verified during commissioning. Use manufacturer data for chiller VFD performance. Savings based on the estimated chiller VFD energy use and the baseline operating profile. Verified pump savings based on power measurements taken after commissioning	Annually monitor key performance indicators, including chilled water flows, temperatures and loop static pressure, as well as pump energy use to verify that ECM is operating as intended. Work with central plant operations staff after commissioning to ensure that chiller energy use is optimized based on actual requirements. Long term changes in cooling load requirements and distribution systems are anticipated.	Weather, building cooling loads, occupancy, chiller efficiency with VFD operation	Estimated for Chiller VFD A for new pumps

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #4 – Lighting Efficiency Improvements						
Interior Lighting Improvements	- Electrical Use - Electric Demand - Natural Gas Use	Power measurements taken on a random sample of fixtures. Runtime and occupancy logged with secondary equipment. Existing equipment specifications gathered from field inspections and from operator and staff interviews.	Verified savings based on power measurements taken on a random sample of fixtures. Runtime and occupancy estimated from operator and staff interviews.	Inspect representative sample of fixtures annually to verify that ECM is operating as intended	Occupancy, Runtime	A
ECM #5 – Water Efficiency Upgrades						
Domestic Water Conservation: (Water Closets, Urinals, Faucets, Showers)	- Natural Gas Use - Water / Sewer Use	Measure water use for sample of existing water fixtures. Use patterns and run time estimated from operator and staff interviews	Verified savings based on measured water use for sample of new water fixtures. Use patterns and run time estimated from operator and staff interviews	Inspect annually to verify that ECM is operating as intended	Occupancy	A

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #6 – Control System Upgrades - INET Seven						
EMS: – Additional scheduling of AHUs – Temperature reset – Recommission (RCX) existing systems	- Electrical Use - Electric Demand - Natural Gas Use	Measure key parameters for a sample of existing systems including fan power, CO2, airflow and temperatures to determine savings using an eQUEST model. Runtime and setpoints estimated from trends of key parameters, operator interviews and secondary logging.	Monitor key performance indicators such as temperature after commissioning to demonstrate that strategies have been implemented and are operating as expected. Verified operating sequences based on reviewed trend data	Monitor key performance indicators periodically and inspect annually to verify that ECMs are operating as intended	Weather, building heating and cooling loads, occupancy	Estimated
ECM #7 – HVAC System Efficiency Improvements						
HVAC Systems Efficiency: – D1 HW Coil & VFD – VAV conversion – Kitchen hood controls – Pool Filter Pump VFD	- Electrical Use - Electric Demand - Natural Gas Use	Measure key parameters for a sample of existing systems including fan and pump powers and temperatures to determine savings using an eQUEST model. Manufacturer data for valve and piping modifications used to estimate savings Runtime and setpoints to be estimated from trends of key parameters, operator interviews and secondary logging.	Monitor key performance indicators such as temperatures after commissioning to demonstrate that strategies have been implemented and are operating as expected. Performance of new sequences and sensor equipment will be verified during commissioning. Verified savings of the Pool Filter pump based on measured power.	Monitor key performance indicators periodically and inspect annually to verify that ECM is operating as intended	Weather, building heating and cooling loads, occupancy	Estimated for Valve conversion, hood controls and VAV conversion A for Pump VFD

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #8 – HVAC System Infrastructure Upgrades						
Systems: – New induction units – AHU replacement – Hot water heat exchanger replacement	No energy savings associated with these infrastructure upgrades	.				
ECM #9 – –Window Upgrades						
New Window Walls in C, D and E corridors	- Electrical Use - Natural Gas Use	Baseline conditions based on manufacturer's data and as-built drawings. Use and setpoints estimated.	Inspect building window wall improvements to verify that they were installed correctly. Savings calculated using the updating baseline model for the as-built conditions.	Inspect annually to verify that ECM is functioning as intended	Weather, building heating and cooling loads.	Estimated

ECM # and Description	Utility Category Affected	Baseline M&V Activities	Post-Installation M&V Activities	Duration of Monitoring	Contractually Agreed Upon Variables	IPMVP Option
ECM #10 – Renewables Initiative – Solar Water Heating						
– PE Facility Pool Water Solar Heating	- Natural Gas Use	Baseline conditions based on manufacturer's data and as-built drawings. Fixture survey and water flow measurements were collected Runtime and occupancy estimated from operator and staff interviews and customer provided population data	Inspect solar water heating improvements after commissioning to verify that they were installed correctly and are functioning as intended. Runtime and occupancy estimated from operator and staff interviews.	Inspect annually to verify that ECM is functioning as intended	Weather, building heating loads, Solar parameters including cloud cover	Estimated
ECM #11D – CCICS Efficiency and Infrastructure Upgrades						
Boilers – New Heating hot water boilers	- Natural Gas Use	Measured the combustion gas efficiency on existing units Used manufacturer data for boiler water flows and pump performance. Runtime, loads and operational profile estimated from EMCS trends, logger data and operator logs.	Measure combustion gas efficiency of new boilers after commissioning. Verified savings based on the manufacturer's ratings of the installed equipment and the baseline operating profile. Runtime, loads and baseline operational profile estimate.	Inspect annually to verify that boilers are operating as intended.	Weather, building heating loads, occupancy	A

8.3 SAVINGS SUMMARY

A summary of the ECM savings are shown in Section 5.0 Financial Analysis

8.4 ENERGY UNIT COSTS

The unit energy and water costs shown in the following tables are used to calculate monthly energy and water savings in the Engineering Calculations of energy savings. The description of how the baseline was developed for the electric, natural gas and water & sewer can be found in Section 3.0 Baseline Analysis. The electric unit costs listed in Table 8.4 will be compared to actual utility rates during each Guaranty Period, throughout the Agreement term, and the higher of these values shown or the actual rates in force will be used to determine savings. Water and sewer rates are shown in Table 8.5. Escalation rates are shown in Table 8.6. Annual Guaranteed savings are shown in Table 8.7.

Electricity

NEIU's electricity delivery service is provided by Commonwealth Edison Company (ComED). Their electricity supply is provided by Exelon. The resulting assumed electricity rates for various accounts are summarized in Table 8.4 below.

Table 8.4 - Marginal Electric Unit Costs

Exelon Account(s)	Facility	Electricity Supplier	Total	
			$/kW	$/kWh
Multiple Accounts	**Main Campus CCICS**	Exelon ComED	**$5.50**	**$0.07**

Natural Gas

NEIU has an agreement with Exelon energy for natural gas delivery. NEIU and NORESCO agreed to use a negotiated rate. Therefore, NEIU and NORESCO agreed to hold the assumed price for NORESCO's energy saving calculations to a **$0.70** per therm boundary price.

Water & Sewer Charge

The water rate is based on utility bills from the City of Chicago, Department of Water management published rates. Assumed water and sewer rates are summarized in Table 8.5 below.

Table 8.5 - Water & Sewer Marginal Unit Costs

City of Chicago, Department of Water Management Account	Water $/1000 Gal ($/KG)	Sewer $/1000 Gal ($/KG)	Total $/1000 Gal. ($/KG)
Multiple Accounts	$1.90	$1.61	$3.51

Escalation rates are summarized in Table 8.6 below.

Table 8.6 - Escalation Rates

Year(s)	Electric Energy and Demand	Natural Gas	Water	Sewer	O&M
0	0.0%	0.0%	0.0%	0.0%	0.0%
1 to 20	3.5%	3.5%	3.5%	3.5%	3.0%

Note 1: Year Zero is the construction period (18 months).
Note 2: Year 1 will start after the controls ECMs are commissioned

ECM SPECIFIC EXAMPLE M&V PLANS

ECM Specific M&V plans will be provided as part of the Energy Services Agreement once the final project ECM scopes are defined. The following descriptions are included as illustrative examples.

ECM 1: CO-GEN SYSTEM OPTIMIZATION

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

NORESCO evaluated adding a heat recovery unit for the existing engine generators #1, 2, 3 and 4 to reclaim energy lost from engine exhaust. The heat will enhance the existing boiler combustion efficiency and reduce the number of operating boilers. In addition, this measure includes installing additional controls and graphical user interfaces to the existing ICONICS system to optimize the operation of the co-gen and boiler plants.

The M&V approach will be based on a pre and post measurement approach of the co-gen. The co-gen exhaust flows and temperatures will be measured using a calibrated airflow meter and temperature sensor and documenting the test conditions. The temperatures on the heat recovery unit will also be captured during post installation. .

Verified Savings Calculation Methodology

The successful installation of the heat recovery unit will include the detailed commissioning and verification that it is operating as expected. The verified energy savings for the heat recovery unit are defined as the difference between the baseline and post-installation energy use as calculated by a spreadsheet model.

Ongoing verification will include remote monitoring and verification to confirm that the strategies implemented continue to operate as intended.

Baseline M&V Activities

The following parameters were measured for all four engine sets using a calibrated airflow and temperature meter:

- exhaust gas flow
- exhaust gas temperature

The following parameters were measured for Boiler #1, 2 and 3 using a calibrated combustion analyzer:

- Excess air percentage
- Flue gas temperature
- Combustion efficiency

The following parameters were measured for the jacket water heat exchanger using a calibrated water flowmeter:

- Jacket heat recovery flow to the HTHW loop

The following parameters were measured for the jacket water heat exchanger using a calibrated handheld thermometer:

- Jacket heat recovery temperatures in and out of the heat exchanger for the engine sets and the HTHW loop

In addition to the measured parameters, NORESCO obtained operating logs for the engine sets and boilers and was able to construct a spreadsheet model for the co-gen and boiler plant operations using long term TMY weather data for Chicago, IL. The spreadsheet was calibrated with the gas utility data to constitute the baseline gas use.

Post-Installation M&V Activities

The ECM proper installation and operation will be verified as a part of the detailed commissioning task at the end of the construction phase including verification that the heat recovery unit is opertating as expected. Once the heat recovery unit performance is verified and accepted after commissioning the verified savings will be deemed occurring as per the engineering calculations.

Performance Period M&V Activities

Annual inspections will be performed to ensure the ECM continues to be operational and functioning; and, any deviation will be documented in the annual verification report (AVR). NORESCO will periodically use trend logs to confirm post-retrofit implementation of ICONICS control strategy through monitoring engine set heat recovery unit temperatures.

ECM 2: HTHW BOILER CONTROLS

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

Upgrade boiler control for Boilers #1, 2 and 3 which will enhance the boiler combustion efficiency through tighter oxygen control. Installation pipe insulation jackets for the HTHW system expansion joints.

The M&V approach will be based on a pre and post measurement approach for the following ECMs. The Boiler O2 trim will use combustion efficiency using a calibrated combustion analyzer and documenting the test conditions such as ambient conditions and boiler loading or firing rate. The expansion joint insulation will use manufacturer data and field collected data for pre and post savings.

Verified Savings Calculation Methodology

The measured combustion efficiency value will be compared to post-installation combustion efficiency value calculated by the spreadsheet model. If the measured combustion efficiency is within 2% of projected, the verified natural gas savings will be equal to the proposed savings. If the measured efficiency varies by more than 2% from the proposed efficiency the measured efficiency will be used in the spreadsheet model and NORESCO will revise the natural gas savings numbers and document the revised savings as verified savings.

The pipe expansion savings once installed will be deemed occurring as per the engineering calculations.

Baseline M&V Activities

The following parameters were measured for Boilers #1, 2 and 3 using a calibrated combustion analyzer:

- Excess air percentage
- Flue gas temperature
- Combustion efficiency

In addition, to the measured parameters NORESCO obtained Boiler plant operating logs and was able to construct a spreadsheet model for the boiler plant operation using long term TMY weather data for Chicago, IL. The spreadsheet was calibrated with the gas utility data to constitute the baseline gas use.

Operating hours were based on the run hours for Boiler #1, 2 and 3 obtained from CUSTOMER boiler logs.

A survey of HTHW expansion joints was used in the engineering calculations.

Post-Installation M&V Activities

The ECM proper installation and operation will verified as a part of the detailed commissioning task at the end of the construction phase including combustion efficiency testing and inspection of insulation. Once the performance is verified and accepted after commissioning the verified savings will be deemed occurring as per the engineering calculations.

Performance Period M&V Activities

Annual inspections will be performed to ensure the ECM continues to be operational and functioning as expected. Any deviation will be documented in the annual verification report (AVR).

ECM 3: CHILLER PLANT EFFICIENCY IMPROVEMENTS

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

The chiller upgrade will include installation of VFD on the compressor for the lead Model 19XR-7776576ENS68 Carrier chiller. The proposed upgrade will achieve savings through better part load performance at lower load levels.

Upgraded controls for Chiller#1 and 2 are included since new algorithms and logic will be required to balance operation. That will also include enhanced controls and better use of condenser water temperatures.

Modify the chilled water pump operation to match the chiller and distribution system parameters. Several options were evaluated for pump operation that include possible variable flow using a VFD, a piping distribution change at the central plant and possibly trimming the chilled water pump impellers.

The M&V approach is built on refining the building baseline spreadsheet model using data collected during the energy audit such as measured chilled and condenser water flows, measured chilled water and condenser water supply temperatures, EMS trend data, chiller power and manufacturer data. In the post-installation case for the chiller VFD, EMS trend data will be reviewed periodically through the creation of custom charts to confirm that the as-built programs are still in place and hence are generating the savings calculated by the model.

Verified Savings Calculation Methodology

The spreadsheet model was run twice: first with the baseline inputs, then a second time using the applicable characteristics and manufacturer's ratings of the upgraded chillers. The difference between the baseline energy use and the post-installation energy use is the energy use savings.

Verified savings will be calculated using the post-installation model described above and will be based on the successful commissioning of the upgraded chiller plant and a periodic review of trend logs to confirm that the new equipment is operational and functioning per the design intent.

The verified energy savings for this measure are defined as the difference between the baseline and post-installation energy use as calculated by the spreadsheet model. Ongoing verification will include remote monitoring and verification to confirm that the strategies implemented continue to operate as intended.

Baseline M&V Activities

NORESCO surveyed the chiller plant to establish baseline operating conditions. EMS trend data was used to determine space temperature setpoints and discharge air temperature setpoints, outside air percentage and chilled water supply temperature. The collected data was used to establish the building cooling load profile and hence the chiller plant load profile. This data was input in the spreadsheet simulation model. The following parameters were measured in the field to calibrate the EMS trend data

Measured Data:

- Chilled water supply temperature
- Chilled water return temperature
- Condenser water supply temperature
- Condenser water return temperature
- Chilled water flow rate
- Condenser water flow rate
- Chiller power recorded off of the chiller panel

Estimated Variables:

- Weather data was estimated based on long term TMY data
- Chiller part-load performance data was provided by Carrier and de-rated to account for the age of the chillers
- Building loads (based on spreadsheet model results)

The chiller plant energy use per the eQUEST Model was then further calibrated using the sub-metered chiller plant data.

Post-Installation M&V Activities

Post-installation M&V activities will focus on ensuring that the chiller upgrades conform to the design specifications. Successful completion of commissioning of the chiller upgrades in accordance with the commissioning plan shall constitute verification of the ability of the new equipment to perform as designed. Post-installation energy consumption will be based on the eQUEST calibrated simulation model using the new part-load performance data provided by Carrier and the reduced condenser water temperatures.

Performance Period M&V Activities

Annual verification and reporting for the duration of the contract will include periodic monitoring of the chiller plant trend data collected remotely via the EMS including the creation of custom charts to verify that the chillers are operating as expected. Any issues found and corrective actions taken will be communicated to the CUSTOMER with documentation in the annual verification report (AVR).

On site inspection of upgraded chillers will be performed annually to verify that the upgrades continue to be in place and in operable conditions. Also chiller maintenance logs will be reviewed to ensure the optimum performance of the chillers is being sustained and any adverse effects on the efficiency due to tube scaling or improper lubrication properties are being avoided.

Based on the performance data provided by Carrier and the eQUEST model, the two chillers are capable of carrying the entire cooling load throughout the season. If there are changes to the chiller plant control sequence that would cause either of the non-upgraded chillers to run in place of either of the two upgraded chillers the impact of such changes will be discussed with CUSTOMER. Such changes are the responsibility of the CUSTOMER. NORESCO will note these changes when found and inform CUSTOMER, but will not make adjustments to the post-installation energy consumption model, because these factors are outside of NORESCO control.

Some of the key parameters that will be trended for both chillers include:

- Chilled water supply temperature
- Chilled water return temperature
- Condenser water supply temperature
- Condenser water return temperature
- Chilled water flow rate
- Condenser water flow rate
- Chiller power

In addition, for the other two chillers, the following parameter will be trended

- Chiller status

Monitoring of these systems will require NORESCO to access these systems both on-site and remotely. Energy savings shown in the annual report will be based on the results documented in the post-installation report.

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ECM 4: LIGHTING EFFICIENCY UPGRADE

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

NORESCO measured baseline fixture wattages for a statistical representative sample of fixtures from a number of pre-installation lamp and ballast combination (LBC) groups that represents at least 90 percent of the connected pre-installation electrical load (kW). The pre-installation LBC groups scheduled for measurement will be based on fixture quantities and hours of operation. Upon completion of construction, NORESCO will measure the post-installation electrical demand of a representative sample of fixtures from a number of post-installation LBC groups that represents at least 90 percent of the connected post-installation electrical load (kW). The post-installation LBC groups selected for measurement will be based on proposed fixture quantities. Hours of operation for each building's fixtures were determined via CUSTOMER interviews and data loggers. Any variances in the number and / or equipment installed from the proposed scope of work will be noted in the Post-Installation Report generated by NORESCO. Verified savings will be calculated based on measured post-installation fixture wattages and the as-built quantities.

Verified Savings Calculation Methodology

To calculate the proposed direct lighting savings, fixtures have been grouped with others sharing the same baseline lamp and ballast combination, post-installation LBC, and hours of operation. For each group, energy savings during each time of use period are calculated.

NORESCO calculated the contribution to proposed peak demand savings by applying a diversity factor to the gross connected load (kW). The operating schedule determines the demand diversity factor. For each group of fixtures in the ECM, NORESCO calculated the monthly proposed demand savings.

Direct Lighting Savings

Electric Consumption

$$ES_{LIGHTING} = \left(P_{base} * N_{base} - P_{post} * N_{post}\right) * H_{base}$$

Where: $ES_{lighting}$ = *Energy savings, in kWh, for the lighting retrofits.*
P_{base} = *Electrical power, in kW, per fixture for appropriate baseline LBC group.*
P_{post} = *Electrical power, in kW, per fixture for appropriate post-installation LBC group.*
H_{base} = *Existing annual operating hours defined by fixture's pre hours group.*
N_{base} = *Number of fixtures in representative baseline LBC group.*
N_{post} = *Number of fixtures in representative post-installation LBC group*

Electric Demand

$$DS_{LIGHTING} = \left(P_{base} * N_{base} - P_{post} * N_{post}\right) * DF_{lighting}$$

Where: $DS_{lighting}$ = *Monthly demand savings, in kW, for the lighting retrofits.*
P_{base} = *Electrical power, in kW, per fixture for appropriate baseline LBC group.*
P_{post} = *Electrical power, in kW, per fixture for appropriate post-installation LBC group.*
$DF_{lighting}$ = *Hours group diversity factor*
N_{base} = *Number of fixtures in representative baseline LBC group.*
N_{post} = *Number of fixtures in representative post-installation LBC group*

Energy and demand cost savings are determined by multiplying the proposed energy and demand savings for each applicable LBC by the approved incremental energy costs. The results of these calculations are summed for total electric demand (kW) and energy (kWh) savings.

The detailed calculations for the proposed savings, including the baseline and proposed fixture wattages and operating hours, can be found in the energy audit

Baseline M&V Activities

Pre-installation audits were used with established lighting fixture wattage tables to estimate the baseline energy consumption for the fixtures to be retrofit. Baseline measurements were taken prior to the replacement or retrofit of the existing fixtures. NORESCO measured fixture wattages for a statistical representative sample of fixtures from a number of pre-installation LBC groups that represents 90% of the connected pre-installation electrical load (kW). The pre-installation LBC groups scheduled for measurement were based on fixture quantities and hours of operation. NORESCO recorded the ballast type, manufacturer, and model number for all fixtures measured. Pre-installation samples and measurements were witnessed and reviewed by a CUSTOMER representative.

Table 7.14 Example Baseline Measurement Results

90 % Confidence Level

LBC Description	LBC Population	Total Connected Load (kW)	No. of Measurements	Average Wattage	CV
62/SE	564	74.4	3	130	6%
34/T8L	1,216	103.4	3	84	1%
42/T8L	648	37.6	3	58	2%
43/T8L	849	74.7	3	87	1%
52/T8L	4,212	324.3	3	78	3%

Hours of operation for each building's fixtures were determined via discussions with CUSTOMER and on-site observations supported with the data collected from lighting run time loggers installed for a period of 2 to 4 weeks. The logger data is included in the Appendix Section. These mutually agreed upon hours of operation will be used for both baseline and post-installation energy savings calculations. In areas where daylighting controls will be installed, the baseline hours will be multiplied by a reduction factor to obtain the post-installation hours of operations.

Post-Installation M&V Activities

Upon completion of construction, NORESCO will measure the post-installation electrical demand of a representative sample of fixtures from a number of post-installation LBC groups that represents at least 90 percent of the connected post-installation electrical load (kW). The post-installation LBC groups selected for measurement will be based on proposed fixture quantities. A true RMS electric power meter will be used to measure the fixture wattage. Fixture wattage power measurements will be performed on individual fixtures where feasible. If a dedicated circuit feeds a group of identical fixtures (i.e., the same LBC) the circuit may be measured as a whole if measurement of individual fixtures is not feasible.

Table 7.15 Example Proposed Post-Installation Sampling Plan
90 % Confidence Level, ±10% Precision

LBC Description	LBC Population	LBC Connected Load	Expected CV	Estimated Sample Size
F28T8/8xx - 2 - 4' 2L ELEC HE - 1	849	40.8	10%	3
F28T8/8xx - 2 - 4' 2L ELEC HE LO - 1	830	34.9	10%	3
F40T8/8xx - 1 - 4' 2L ELEC HE - 1	5,992	245.7	10%	3

NORESCO will record the ballast type, manufacturer, and model number for all fixtures measured. Post-installation sampling and measurements will be witnessed and signed-off by a CUSTOMER representative. The on-site NORESCO construction manager will monitor installation and retrofit of fixtures and verify that the correct products are installed. Any variances in the number and / or equipment installed from the proposed scope of work will be noted in the As-Built Report generated by NORESCO. The equations described above will be used to calculate verified savings based on the as-built quantities and equipment.

Performance Period M&V Activities

NORESCO will visually inspect a small sample of fixtures during the annual inspection to verify that the proper replacement lamps are being used. NORESCO will also survey the maintenance stock and maintenance records to confirm that the proper lamps and ballasts are being inventoried. All discrepancies and improper maintenance practices found will be reported.

No additional measurements will be performed. Verified energy savings will be based on the baseline and one time post-installation measurements and calculations described above.

ECM 5: WATER EFFICIENCY UPGRADES

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

This ECM involves the replacement of existing fixtures with new high efficiency, low flow fixtures. Savings for this ECM are calculated using the pre-installation and post-installation flow rates of each type of fixture that will be retrofitted, and the annual use profile. The average flow rate for each type of fixture will be based on measurements for a statistically valid sample of fixtures. Each type of retrofitted fixture will be represented in the measured sample. The baseline water use for each fixture type is the average flow rate multiplied by the stipulated use per person per day. The total baseline water consumption is the sum of the baseline water consumption for each type of fixture. The use profile is stipulated for the calculation of water savings.

Verified Savings Calculation Methodology

Savings for this ECM are calculated using the pre-installation and post-installation flow rates of each type of fixture that will be retrofitted, and the annual use profile.

The average flow rate for each type of fixture will be based on measurements for a statistically valid sample of fixtures. Each type of retrofitted fixture will be represented in the measured sample. The baseline water use for each fixture type is the average flow rate multiplied by the stipulated use per person per day. The total baseline water consumption is the sum of the baseline water consumption for each type of fixture. The use profile is stipulated for the calculation of water savings

Toilet and Urinal Water Savings

$$WS = \left(Q_{base} - Q_{post}\right) * N * FPD * DPY$$
$$WCS = WS * WR$$

Where:

WS	= Annual water savings (gal/yr)
WCS	= Annual toilet water cost savings ($/yr)
Q_{base}	= Average baseline flow rate (gpf)
Q_{post}	= Average post-installation flow rate (gpf)
N	= Number of people
FPD	= Flushes per day per person
DPY	= Days per year
WR	= Water Rate ($/kGal)

Faucet Water Savings

$$FWS = \left(Q_{base} - Q_{post}\right) * N * UPD * MPU * DPY$$

Where:

FWS = Water savings, in gal/yr, for the faucet retrofits.
Q_{base} = Average baseline flow rate, in gpm, per fixture from baseline sampling plan.
Q_{post} = Average post-installation flow rate, in gpm, per fixture from post retrofit sampling plan.
N = Number of people per occupant group.
UPD = Uses per occupant group per day.
MPU = Minutes per use per occupant group.
DPY = Days per year per occupant group.

Shower Water Savings

$$SWS = \left(Q_{base} * N * UPD * MPU_{base} * DPY\right) - \left(Q_{post} N * UPD * MPU_{post} * DPY\right)$$

Where:

SWS = Water savings, in gal/yr, for the showerhead retrofits.
Q_{base} = Average baseline flow rate, in gpm, per fixture from baseline sampling plan.
Q_{post} = Average post-installation flow rate, in gpm, per fixture from post retrofit sampling plan.
N = Number of people per occupant group.
UPD = Uses per occupant group per day.
MPU_{base} = Minutes per use in pre-retrofit case per occupant group.
DPY = Days per year per occupant group.
MPU_{post} = Minutes per use in post-retrofit case per occupant group

The results of these water use calculations are summed for total water (kgal) savings. Cost savings are determined by multiplying the total water savings by the approved incremental water and sewer costs.

Baseline M&V Activities

The water use of the sampled toilets and urinals, in gallons per flush (gpf), was measured using a shop vacuum with 5 gallon bucket and a rubber stopper, while faucets were measured using a graduated plastic bag and a stopwatch to calculate the flow rate (gpm). Spot measurements of a representative sample of existing fixtures were performed for toilets, urinals, and faucets. Measured fixtures were randomly selected to cover the entire building.

Table 7.16 Example Baseline Measurement Results
80%Confidence Level, ±20% Precision

Fixture Description	Fixture Population	Required Sample Size	No. of Measurements	Average Flow Rate	Measured CV
Toilets	683	7	10	5.09 gpf	42%
Urinals	122	8	10	0.9 gpf	46%
Faucet	671	8	10	2.2 gpm	43%

The fixture type and location for each measured fixture was recorded. Sample measurements were signed-off by a CUSTOMER representative.

Post-Installation M&V Activities

The water use of the new fixture post-installation sample will be measured using the same procedures as in collecting the baseline sample data. Spot measurements of a representative sample of new toilets will be performed. Fixtures to be measured will be randomly selected. Sample sizes will be sufficient to achieve a confidence level of 80 %and a precision level of 20%.

The proposed post-installation sampling plan is shown in Table 7.17. are expected to be smaller than baseline sample because the performance of the new fixtures is more consistent between units. Sample size will be estimated based on the coefficient of variation from previous projects.

Table 7.17 Example Proposed Post-Installation Sampling Plan
80%Confidence Level, ±20% Precision

Fixture Description	Fixture Population	Expected CV	Estimated Sample Size
Toilets	683	10%	3
Urinals	122	25%	3
Faucet	671	25%	3

The fixture or equipment type and location for each measured fixture will be recorded. Selection of the post-installation samples and sample measurements will be witnessed and signed-off by a CUSTOMER representative. Any deviation from the proposed retrofits will be noted in the As-Built Report generated by NORESCO. The equations above will be used to calculate the verified savings.

Performance Period M&V Activities

Annual site visits will verify that the new fixtures are in place and operating as intended. No additional measurements will be performed. Verified water and energy savings will be based on the baseline and one time post-installation measurements and calculations described above.

ECM 6:CONTROL SYSTEM UPGRADES - INET

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

NORESCO will implement Energy Management System (EMS) control strategy optimization that will reduce unnecessary mechanical cooling or heating through implementing an economizer control based on enthalpy of the outside air as compared to the return air. In addition, the optimized control strategies will reduce unnecessary reheat by resetting the discharge air temperature (DAT) based on the warmest zone. Another strategy will be to program the EMS to reset the chilled water supply temperature setpoint based on the outside air temperature to improve chiller efficiency.

The M&V approach is built on refining the building baseline eQUEST model using data collected during the IGA such as measured air flow rate (CFM), measured fan power (kW), measured chilled water supply temperature and EMS trend data showing the operating conditions such as discharge air temperature (DAT) and return air temperature (RAT) and chilled water supply temperature. Ultimately the eQUEST model was calibrated with utility billing data. In the post-installation case EMS trend data will be reviewed periodically through the creation of custom charts to confirm that the as-built programs are still in place and hence are generating the savings calculated by the model.

Verified Savings Calculation Methodology

The eQUEST calibrated simulation model was run twice: first with the baseline inputs, then a second time using the proposed control strategies. The difference between the baseline energy use and the post-installation energy use is the energy use savings.

Verified savings will be calculated using the post-installation model described above and will be based on the successful commissioning of the EMS controls optimization and a periodic review of trend logs to confirm that the as-built control strategies are still in place and are functioning per the design intent.

The verified energy savings for this measure are defined as the difference between the baseline and post-installation energy use as calculated by the eQUEST model. Ongoing verification will include remote monitoring and verification to confirm that the strategies implemented continue to operate as intended.

Baseline M&V Activities

NORESCO surveyed the EMS and verified the level of existing control and interviewed CUSTOMER personnel to establish baseline operating conditions. EMS trend data was used to determine space temperature setpoints and discharge air temperature setpoints, outside air percentage and chilled water supply temperature. This data was input in the eQUEST building model. The eQUEST calibrated simulation model was used to establish the baseline energy use.

Measured Data:

- AHU Supply and Return Fans amps, volts and power (kW) on several AHUs
- Supply Air Flow (CFM) on Several AHUs
- Chilled water supply temperature
- Condenser water supply temperature
- Chilled water flow rate
- Condenser water flow rate
- Reading chiller power of the chiller panel to calibrate EMS trend data

Estimated Variables:

- Weather data was estimated based on long term TMY data
- Building loads (based on eQUEST model results)

Post-Installation M&V Activities

Post-installation M&V activities will focus on ensuring that the new control sequences conform to the design specifications. Successful completion of commissioning of the new controls system in accordance with the commissioning plan shall constitute verification of the ability of the new equipment to perform as designed. Trend logs from the control system will be evaluated to confirm that the proposed control strategies have been implemented. Post-installation energy consumption will be based on the eQUEST calibrated simulation model.

Performance Period M&V Activities

Annual verification and reporting for the duration of the contract will include periodic monitoring of EMS including creating custom charts to verify that the control strategies continue to be in place without change or manual overriding. Any issues found and recommended corrective actions will be communicated to CUSTOMER with documentation in the annual verification report (AVR). On site inspection of EMS will be performed at least annually to verify that the dampers for both outside air and return air continue to be in good operable conditions and that the temperature sensors affecting the control strategies are accurate.

These results will be discussed with CUSTOMER if changes to the energy savings strategies have been made that may negatively impact the effectiveness of this measure. Such changes are the responsibility of the CUSTOMER. NORESCO will note these changes when found and inform CUSTOMER, but will not make adjustments to the post-installation energy consumption

model, because these factors are outside of NORESCO control. Some of the key parameters that will be trended include:

- Outside air damper position
- Discharge air temperature
- Mixed air temperature
- Return air temperature
- Outside air temperature
- Chilled water supply temperature

Monitoring of these systems will require NORESCO to access these systems both on-site and remotely. Energy savings shown in the annual report will be based on the results documented in the post-installation report.

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ECM 7: HVAC System Efficiency Improvements

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

NORESCO recommends installing CHW coil isolation valves on the AHUs to avoid running a chilled water pump for freeze protection. The M&V approach will be the deemed energy savings approach per the engineering calculations.

Verified Savings Calculation Methodology

The savings were calculated using the eQUEST building model with the post-installation case shutting down the one chilled water pump that runs in the baseline to keep the CHW coils from freezing. The energy savings will be achieved due to the ability to drain the coils and isolate when mechanical cooling is not needed. The verified energy savings for this measure are defined as the difference between the calculated baseline and post-installation energy use. Ongoing verification will include remote monitoring and verification to confirm that the measure continues to perform as intended.

Baseline M&V Activities

The following baseline measurements were performed for all chilled water pumps and operating conditions were documented:

- Amps
- Volts
- power factor
- Power (kW)

Estimated Variables:

- Weather data was estimated based on long term TMY data
- Building loads (based on eQUEST model results)

Post-Installation M&V Activities

The ECM proper installation and operation will verified as a part of the detailed commissioning task at the end of the construction phase. Once the performance is verified and accepted after commissioning the savings will be deemed occuring as per the engineering calculations.

Performance Period M&V Activities

The pump shutting down will be confirmed through periodical reviews of trend data collected via the EMS. Data collected will include:

- Chilled water pump status (on/off)
- Outside air temperature
- Chiller status for the four chillers

Annual inspections will be performed to ensure the isolation valves continue to be installed and functioning and any deviation will be documented in the annual verification report (AVR).

ECM 8: HVAC System Infrastructure Upgrades (New Equip)

Overview of M&V Plan

NORESCO will retrofit the existing S-3 and ER-3 with a new variable frequency drive (VFD) and reprogram the EMS to modulate the new VFDs and the existing VFDs on S-4 and ER-4 based on the duct static pressure. VAV will be installed in the areas served by these two AHUs to enable the variable air volume operation. The fan energy consumption will be saved by modulating the speed based on the cooling demand. Thermal energy savings will also be achieved due to reduction in air volume across the coils.

The M&V approach is built on refining the building baseline eQUEST model using data collected during the IGA such as measured air flow rate (CFM), measured fan power (kW) and EMS trend data showing space temperature setpoints and building occupancy schedules. Ultimately the eQUEST model was calibrated with utility billing data. In the post-installation case EMS trend data will be reviewed periodically through the creation of custom charts to confirm that the as-built programs are still in place and hence are generating the savings calculated by the model.

New Induction Units- Lech Walesa Hall
AHU Replacement Bldg E Including Convertion to VAV on E2 & E-7
HW H/EX Replacement - Science

Verified Savings Calculation Methodology

The eQUEST calibrated simulation model was run twice: first with the baseline air-side equipment in place per the detailed mechanical equipment survey, then a second time using the proposed equipment and systems in place. The difference between the baseline energy use and the post-installation energy use is the energy use savings.

Verified savings will be calculated using the post-installation model described above and will be based on the successful commissioning of the VAV conversion, review of trend logs to confirm that the VFDs and the VAV boxes are as per the design intent. The verified energy savings for this measure are defined as the difference between the calculated baseline and post-installation energy use. Ongoing verification will include remote monitoring and verification to confirm that the measure continues to perform as intended.

Baseline M&V Activities

NORESCO surveyed the mechanical systems and interviewed CUSTOMER personnel to establish the baseline occupied and unoccupied hours and temperatures and summarized schedules and temperatures in the HVAC Standards of Operations. NORESCO developed a

computer simulation model of each building with eQUEST program and calibrated the baseline model using available whole building energy use data.

The following baseline measurements were performed for S-3, ER-3, S-4, and ER-4 and operating conditions were documented:

- Amps
- Volts
- power factor
- power (kW)
- Supply air flow (CFM)

EMS trend data was used to determine space temperature setpoints and occupancy schedules. This data was input in the eQUEST building model which was calibrated using utility billing data and pump and fans sub-metered electric data.

Post-Installation M&V Activities

The ECM proper installation and operation will verified as a part of the detailed commissioning task at the end of the construction phase. This shall constitute verification of the ability of the new equipment to perform as designed. Trend logs from the control system will be evaluated to confirm that the proposed equipment and control strategies are operating as intended. Post-installation energy consumption will be based on the eQUEST building model described in this document

Performance Period M&V Activities

The equipment operation (VFDs, fans, dampers etc.) will be verified through periodic review of trend data collected via the EMS. Data collected will include:

- VFD speeds (Hz)
- Supply duct static pressures and static pressure set points

NORESCO will conduct annual inspection to ensure the equipment is in place and operating as intended. Any deficiencies in this system's ability to perform will be noted by NORESCO and corrective actions shall be discussed with CUSTOMER. Energy savings shown in the annual report will be based on the results documented in the post-installation report. All findings will be documented in the annual report.

ECM 9 –WINDOW UPGRADES

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

VERIFIED SAVINGS CALCULATION METHODOLOGY

Savings is based on engineering calculations using published thermal transfer properties of usual building materials. NORESCO created a model to determine the envelope losses of the building sections involved in this measure. Elimination of these losses constitutes the savings seen from this measure. This model was used in conjunction with published thermal transfer properties and building usage histories to calibrate the baseline models.

A visual exploratory forensic analysis was conducted to determine if existing structural conditions were indicative of wasteful energy usage, including heat loss/gain through breaches in the building envelope or lack of thermal boundary. The buildings surveyed varied in design, construction and year completed. All exhibited building envelope conditions suggesting upgrades needed to be addressed. Areas of concern included openings in the "skin" that were "built-in" during the original construction, created during a "retrofit period" and/or have deteriorated through time. .

The spreadsheet load model used data from the following sources:

- Building drawings (building areas, construction, HVAC equipment capacities, and other data)
- TMY BIN weather data for Chicago, IL: NOAA, National Climatic Data Center.
- Estimates from site observations
- Natural Gas Usage Data from billing records
- Logged equipment runtimes
- Discussions with facility personnel (occupancy hours, number of occupants, operating hours of equipment)

If any of these parameters could not be determined from these sources, NORESCO determined the most likely parameter based on standard engineering practices and experience. Key parameters that affect baseline energy use include thermal transfer properties and insulating values of typical building construction materials, weather, operating hours, and building populations. Building operating and occupant data was provided by staff at NEIU.

Thermal transfer properties and insulating values of building construction materials such as walls, roofs, windows, and doors were obtained from construction drawing data. The reconciled baseline energy use model was used to calculate the post installation energy savings. To

determine the projected post-implementation energy use the energy use model was changed to simulate the post retrofit conditions. Savings is the difference in the energy use between the two models.

*Total Cost Savings = Σ [(Total Saved Firm Gas Consumption (MMBtu) * $$/MMBtu$_{Firm.Gas}$)]+ [(Total Saved Electrical Consumption (kWh) * $$/kWh)]*

Values for the variables for the calculations above may be found in the Investment Grade Audit.

BASELINE M&V ACTIVITIES

Pre-installation audits were used to determine the condition of the current weatherization technologies at NEIU.

POST-INSTALLATION M&V ACTIVITIES

Upon completion of construction NORESCO will inspect each building to verify that all equipment was installed correctly and is capable of performing as designed. In all cases, facility representatives will be invited to witness all inspections.

The on-site NORESCO construction manager will verify that the correct products are installed. Any variances in the number and / or equipment installed from the proposed scope of work will be noted in the As-Built Report generated by NORESCO. The equations described above will be used to calculate verified savings based on the as-built quantities and equipment.

ANNUAL M&V ACTIVITIES

No additional measurements or verification will be performed. Verified energy savings will be based on the baseline and one time post-installation inspections and calculations described above.

ECM 7 HVAC System Efficiency Improvements

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

Verified Savings Calculation Methodology

The Energy Management Systems (EMS) savings are calculated based on ASHRAE bin weather data analysis for each building where this ECM is recommended. The savings calculations for each strategy are as follows:

Demand Ventilation Control modulates the outdoor air damper based on the carbon dioxide level sensed in the return air stream. The savings are estimated based on weather data, the estimated percentage of occupied time and number of people (percent of maximum occupancy).

Optimal Start/Stop savings have two components: Fan electric savings are based on the total fan electric load (kW) being controlled, and the existing and proposed operating hours. Heating savings are based on avoiding the need to heat outdoor air, calculated using a bin analysis employing local temperature data, the minimum outdoor air introduced by each air handler, and the occupied temperature setpoint of the associated spaces.

The calculations for this ECM can be found in the Appendix of the ECM write-up.

The parameters used to determine the baseline and post electric energy and demand savings are:

- TMY BIN weather data for Chicago, IL: NOAA, National Climatic Data Center.
- Occupied space temperature setting, heating and cooling
- Occupancy schedule
- Size of building heating and cooling equipment
- Efficiency of heating and cooling equipment
- Electric motor efficiency
- Design air flow of building air distribution system

Total verified electric energy and natural gas savings are the sum of savings calculated for each of the EMS control strategies. Upon successful commissioning, verified electric energy and estimated natural gas savings will be based on the savings calculations in the Phase 1 Proposal.

Baseline M&V Activities

NORESCO verified the function of the EMS thermostats by installing temperature loggers and found that there were no schedules programmed in the thermostats. NORESCO verified that there was no means of controlling space temperature based on schedule. NORESCO used loggers to verify the operation hours on a representative sample of motors. Occupancy schedules were obtained from dialogues with CUSTOMER Personnel.

POST-INSTALLATION M&V ACTIVITIES

NORESCO will commission the EMS hardware and software and verify that proposed strategies are operating as intended (i.e., schedules and temperatures.)

ANNUAL M&V ACTIVITIES

NORESCO will collect trend at regular intervals and review it to confirm that the proposed strategies are operating as intended (i.e., schedules and temperatures) during the guarantee period. Significant deviations to the schedules that are likely to impact the savings potential of the ECM will be reported to the Customer at least quarterly.

NORESCO will inspect the control systems at least annually to confirm that the control system hardware and control sequences are in place and operating as intended during guarantee period. Any issues found and corrective actions will be reported to the Customer and documented in the annual report.

ECM 10 SOLAR POOL WATER HEATING

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

To reduce the energy consumed to heat the two pools as well as the domestic hot water needs of the building, NORESCO proposes to install a solar thermal system to harness energy from the sun. An array of flat plate solar collectors will be installed on the roof of the athletic facility. The heated fluid will circulate through a large storage tank located outside the basement mechanical space. Two separate heat exchangers located in the mechanical room would transfer heat from the storage tank to the respective heat load. This dual mode system has been designed to take advantage of the cyclical heat demand of the facility; for example, in the summer months when the heat demand of the pool water is lower, the heat generated by the system can be shifted to the domestic hot water load, serving the increased usage of showers, sinks, and laundry in the facility.

Savings is realized from reduced heating load of the swimming pool and domestic hot water through the collection of solar heat. This M&V plan is based on the options outlined in the International Performance Measurement and Verification Protocol (IPMVP) 2007. Pre-retrofit activities include one time measurements of pool water temperature, room air temperature, and room humidity. A survey of the roof and roof area will be completed specifically to identify and document obstructions. Post-retrofit activities include one time measurement of solar radiation, water flow through the newly installed system, and inlet and outlet temperatures to ensure the system is operating as expected. No performance period activities are required.

ECM 11 CCICS EFFICIENCY AND INFRASTRUCTURE UPGRADES

Overview of M&V Plan

NORESCO will utilize IPMVP Option A for this ECM.

Replace existing boilers

The M&V approach will be based on a pre and post measurement approach for the following ECMs. The Boiler will use combustion efficiency using a calibrated combustion analyzer and documenting the test conditions such as ambient conditions and boiler loading or firing rate.

Verified Savings Calculation Methodology

The ECM proper installation and operation will verified as a part of the detailed commissioning task at the end of the construction phase the combustion efficiency will be based on manufacturer's ratings of the equipment installed.

Baseline M&V Activities

The following parameters were measured for Boilers #1, 2 and 3 using a calibrated combustion analyzer:

- Excess air percentage
- Flue gas temperature
- Combustion efficiency

In addition, to the measured parameters NORESCO was able to construct a spreadsheet model for the boiler plant operation using long term TMY weather data for Chicago, IL. The spreadsheet was calibrated with the gas utility data to constitute the baseline gas use.

Post-Installation M&V Activities

The ECM proper installation and operation will verified as a part of the detailed commissioning task at the end of the construction phase including combustion efficiency testing. Once the performance is verified and accepted after commissioning the verified savings will be deemed occurring as per the engineering calculations.

Performance Period M&V Activities

Annual inspections will be performed to ensure the ECM continues to be installed and functioning and any deviation will be documented in the annual verification report (AVR).