

Department of Technology, Management and Budget
Facilities & Business Services Administration
Design and Construction Division
For
Michigan Department of Corrections
Bellamy Creek Correctional Facility (IBC)
Technical Energy Assessment Audit
File No. 472/12168.DCS, Index No. 02550

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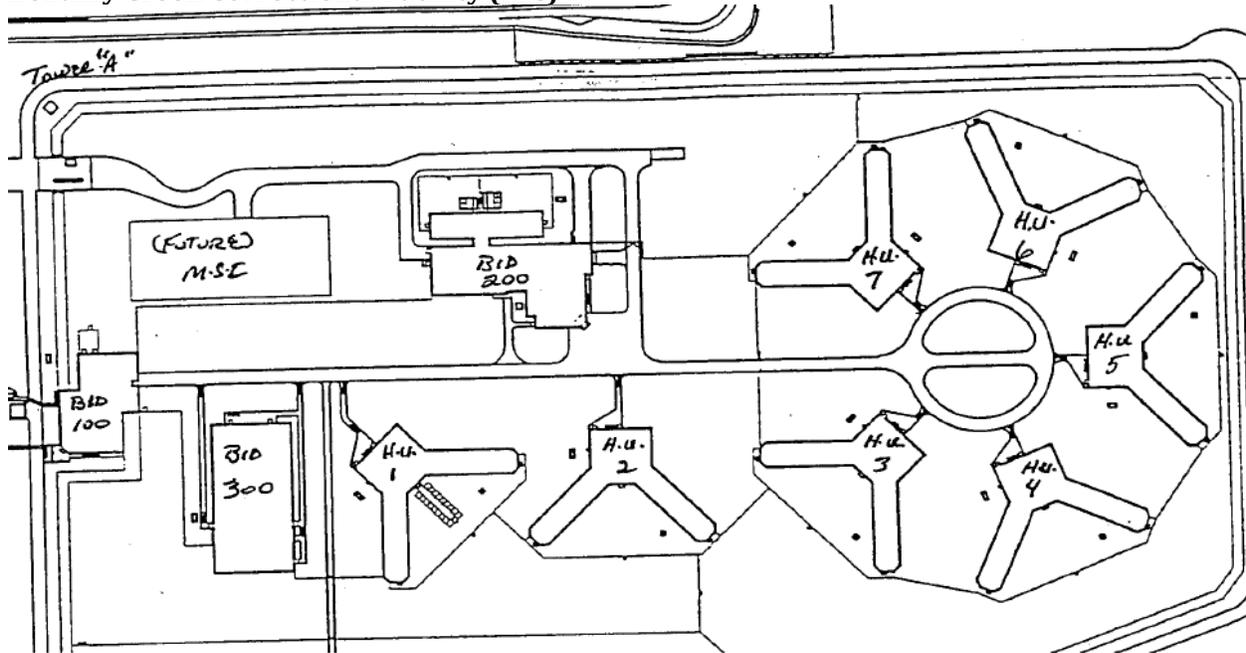
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Section 1: Existing Conditions

SUMMARY TABLE OF RECOMMENDED ENERGY AND WATER SAVINGS MEASURES

Bellamy Creek Correctional Facility (IBC)



1. IBC was built in 1999 with the addition of MSI a few years later. This is the newest facility of the (4) in Ionia and is overall in good condition. The windows are double pane insulated glass and equipment is in good operating condition.
2. Hot water for heating is provided from a Bryant gas fired boiler system in each building. Domestic hot water is provided from a gas fire domestic hot water in each building. The equipment was installed in 1999. All of the housing units have a (1) boiler and (2) domestic hot water heaters. The administration and kitchen/health/segregation have (2) heating boilers. The boilers operate well, but it was reported that the tubes near the water return piping scales up reducing the pipe size and causing a leak.
3. The domestic water heaters are at or nearing the end of their useful life and several are replaced every year.
4. The domestic water heaters in the kitchen have been replaced with Lochinvar high efficiency boilers and are reported to operate well.
5. The Administration building is a VAV system with a VFD. The ductwork in several areas has been repaired due to leaks possible due to over pressurization of the VAV system.
6. Propane back up system is located near the maintenance building that provides propane to the boilers and water heaters on a loss of natural gas. The system is reported to be tested regular and is operational.
7. The buildings share a large common water treatment plant, which consists of a carbon filter, softener, chlorinator, and pressure booster pumps.

8. Central DX Air conditioning is provided in the administration, and health.
9. The inmate housing has (3) exterior radiation zones with a (2) air handlers in inmate cells and offices/control level.
10. The campus has an extensive Johnson Controls Metasys system that is in good condition and operational.
11. There are a total of (12) boilers, and (20) domestic water heaters.
12. MSI is heated with radiant tube and unit heaters. Make up air the exhaust is provided from a direct gas fired make up air handler through a fabric ductwork that was installed to provide make up air for the wood shop. A humidification atomizer (using compressed air) is used to humidify the plant. The equipment is controlled from a central control panel and it is reported that the equipment is shut off when the plant is not in operation.

Dormitory

1. The dormitory is older than Bellamy Creek but maintained by the Bellamy Creek personnel.
2. All of the windows in the inmate cell areas are double pane but the hallways and common areas are still loose fitting single pane windows with steel frames.
3. There is no insulation in the ceiling. Much of the steam and domestic hot water piping is in the attic.
4. The walk in cooler is on the ground with no insulation on the floor.
5. Many of the doors are in poor condition and in need of replacement.
6. The dormitory is heated by steam from the central power.
7. The original underground steam and condensate piping from the central boiler plant was replaced in 2004.
8. The existing steam and condensate piping in the facility is existing and will remain. The piping is original and in poor condition with regular repairs and maintenance.
9. Steam radiators are used for heating in the old dorm and hot water heat (through steam heat exchangers) is used in the new dorm. Steam is also used for domestic hot water and dishwasher booster heater.



Ductwork on the VAV air handler has split due to over pressurization. A high pressure limit and programming will be added to limit the static pressure in the ductwork under **ECM #5: Energy Management System Upgrade/Expansion**



Water cooled compressor in the Dorm for the walk in cooler should be replaced with an air cooled compressor. See **ECM #4: Water and Sewer Conservation and Water Cooled Condenser Replacement**



Heating pumps in some buildings run all summer. Turning the pumps off causes an alarm on the energy management system. This will be reprogrammed as in **ECM #5: Energy Management System Upgrade/Expansion**



Metal halide lighting in the MSI will be changed to fluorescent.
See ECM #2: **Lighting Upgrade**

Other items investigated but not included in ECM due to long payback, no payback or in some cases, an increase in utility usage.



Walk in cooler placed directly on the ground with no insulation and leaky seal on the bottom. The entire walk in cooler should be replaced.



Dormitory – loose single pane windows with steel frames in the corridors and common rooms should be replaced with double pane insulated glass with thermally broken frames. The windows in the inmate areas have been changed to double pane. The windows in the hallway and common areas should be changed to double pane insulated glass or insulated glass and insulated panels.

Very rusted door frames and air gaps; weather stripping doors to prevent infiltration, dirt and bugs from entering will be difficult if not impossible. These doors and frames should be replaced.





In the Dorm attic: Showing missing insulation on piping and in the attic space. Further insulation in the attic will reduce the temperature of the attic potentially causing piping to freeze. The addition of insulation and the requirements of upgrading with no energy saving will have a payback exceeding 25 years.

Section 2: Base Year Energy Usage

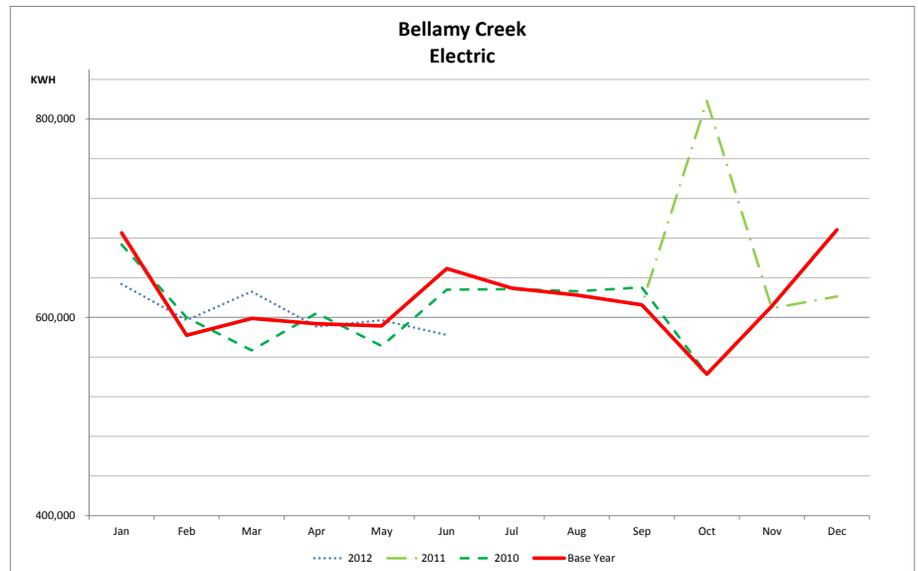
The following section reviews the base year, base year utility rate and comparison to past usage.

ELECTRICAL ENERGY CONSUMPTION

Power is provided by Consumers Energy with a average blended rate of \$.0901/KWH.

The following table is the electrical usage that will be used for the base year electrical usage.

IBC Base Year Electric Summary	
Usage Date	Total Elec Usage (Kwh)
Base Year	
Oct	542,660
Nov	611,397
Dec	688,335
Jan	685,248
Feb	581,942
Mar	598,935
Apr	593,526
May	591,469
Jun	649,287
Jul	629,493
Aug	622,492
Sep	612,663
Annual Totals =	7,407,447



The above graph compares the base year usage to 2010, 2011 and 2012 usage to the base year.

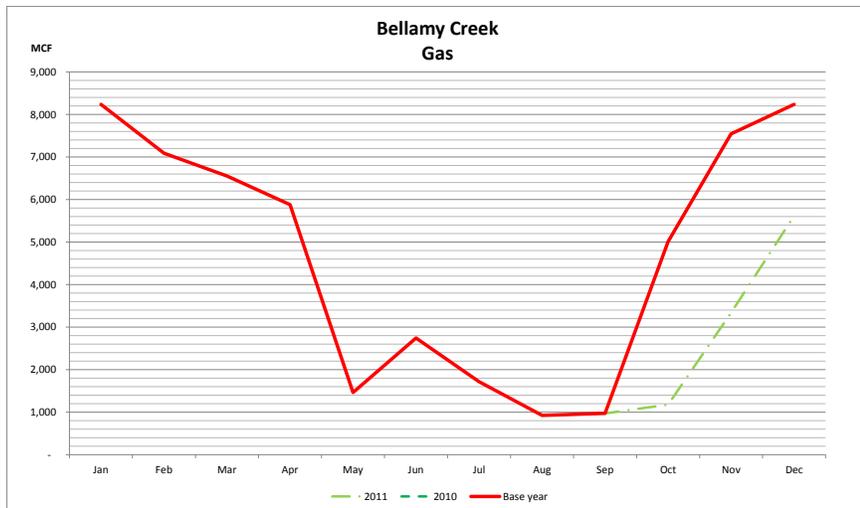
Gas usage summary

Following is the natural gas utility summary for IBC not including the Dormitory, which is provided with steam from the central power plant. The gas is used for heating, domestic hot water and kitchen equipment.

The DOC through the State of Michigan purchases gas through a broker or marketer and the gas is delivered to the facility by Consumers Energy. The price of natural gas due to recent drilling methods, a mild winter and economic recession is at an all-time low. We feel this will not continue and the cost of gas over the lifetime of the equipment will eventually rise.

The following table is the metered natural gas usage.

Bellamy Creek Gas Summary	
Base year	MCF
Oct	5,010
Nov	7,545
Dec	8,238
Jan	8,238
Feb	7,090
Mar	6,555
Apr	5,880
May	1,462
Jun	2,743
Jul	1,719
Aug	925
Sep	972
	56,376



The graph above compares 2010 and 2011 to the base year usage.

WATER & SEWER UTILITY SUMMARY

IBC is provided water from the city of Ionia. Sewer is treated by the city of Ionia and is collected and metered at a single location for the (5) facilities (IBC, ICF, RMI, MTU, Dorm). Water and sewer costs have increased in the past (2) years from \$5.72/KGAL to \$8.06/KGAL with another water increase scheduled for 2018.

The following is the actual metered usage for all water meters associated with IBC. We have assumed the sewer usage is the same as the water.

IBC Water and Sewer Summary	
Usage Date	Total Usage (Kgal)
Base Year	
Dec-10	15,582
Mar-11	14,062
Jun-11	13,605
Sep-11	14,365
Annual Totals =	57,614

DORM STEAM USAGE

The dormitory is provided with steam from the central plant.

UTILITY COST BASELINE & SUMMARY

The following table summarizes the base line usage and cost that will be used for the analysis energy savings.

A base year of October 2010 to September 2011 was selected.

Bellamy Creek and Dormitory Base Utility Summary



Proprietary and Confidential

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*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

Base Year Utility	Base Year Utility Usage		Base Year Utility Cost (\$/yr.)	Base Year Unit Cost		Unit Cost Basis
Electricity	7,407,447	KWH	\$667,574	\$.0901	\$/KWH	Actual blended \$/KWH based on base year costs
Natural Gas	56,376	MCF	\$344,460	\$ 6.11	\$/MCF	Estimated average natural gas cost over the term of the contract
Water and Sewer	57,614	KGAL	\$464,369	\$ 8.06	\$/KGAL	Actual cost of water and sewer that took effect in June 2012
Total			\$1,476,402			

Utility Rate	Regulatory Asset Recovery Surcharge	Surcharges (per month per meter)			Power Supply Cost Recovery (PSCR)		Securitization	Securitization Tax	Stranded Costs	Electric Restructuring Implementation Program (ERIP)	DOE SNF Proceeds Surcharge
		Renewable Energy Plan Surcharge	Energy Efficiency Electric Program Surcharge	Energy Efficiency Self-Directed Customer Surcharge	Maximum Allowable Factor	Actual Factor Billed					
GS Com		\$ 14.40	\$ 44.29	\$ 1.17	\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682	\$ 0.0009	\$ 0.001134	\$ (0.001376)
GS Ind	\$ 0.002916	\$ 14.40	\$ 44.29	\$ 1.17	\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682	\$ 0.0009	\$ 0.001134	\$ (0.001376)
GSD Com		\$ 14.40	\$ 44.29	\$ 1.17	\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682	\$ 0.0009	\$ 0.001134	\$ (0.001376)
GP Com		\$ 90.00	\$ 743.82	\$ 17.49	\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682	\$ 0.0009	\$ 0.001134	\$ (0.001376)
GPD Com		\$ 90.00	\$ 743.82	\$ 17.49	\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682	\$ 0.0009	\$ 0.001134	\$ (0.001376)
GML Com		\$ 2.70			\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682		\$ 0.001134	\$ (0.001376)
GUL Com	*Per light fixture	25/luminaire								\$ 0.001134	\$ (0.001376)
GU Com		\$ 1.40			\$ (0.001940)	\$ (0.001940)	\$ 0.001387	\$ 0.000682		\$ 0.001134	\$ (0.001376)
											*For Customers <15kW

Voltage Level	Capacity Charge (per kW)		Energy Charge (per kWh)				Delivery Charge			Municipal Pumping Service Provision	
	On-Peak Summer	On-Peak Winter	On Peak Summer	On-Peak Winter	Off-Peak Summer	Off-Peak Winter	System Access	Capacity Charge (per kW)	Distribution Charge (per kWh)	On-Peak Summer (per kW)	On-Peak Winter (per kW)
GPD CVL3	\$ 13.00	\$ 11.00	\$ 0.089475	\$ 0.059475	\$ 0.059475	\$ 0.049475	\$100/month	\$ 1.000000	\$ 0.010443	\$ (1.480000)	\$ (1.170000)

*System Access charges are applicable to Full Service and Retail Open Access (ROA) Customers

Electric Base Year										
Facility Name	Address	Utility Rate	Account No.	Meter No.(s)	Billing Period	On Peak Bill Demand Cap	On Peak kWh	Off Peak kWh	Max Demand	Total \$ Due
IBC	1727 W Bluewater Hwy	Elec Gen Pri Rate GPD Com	100000352284	8112/6166269	10/19/10	1,138	132,242	410,418	1,339	\$ 48,922
					11/19/10	1,043	154,331	457,066	1,339	\$ 51,495
					12/22/10	1,080	159,728	528,607	1,339	\$ 54,981
					01/24/11	1,117	162,377	522,871	1,339	\$ 56,400
					02/21/11	1,103	143,913	438,029	1,339	\$ 49,773
					03/22/11	1,123	149,746	449,189	1,339	\$ 51,321
					04/20/11	1,120	149,209	444,317	1,339	\$ 50,938
					05/20/11	1,123	152,541	438,928	1,339	\$ 51,117
					06/21/11	1,259	154,419	494,868	1,339	\$ 64,523
					07/21/11	1,244	159,780	469,713	1,308	\$ 63,455
					08/19/11	1,218	160,480	462,012	1,308	\$ 62,448
					09/20/11	1,166	150,102	462,561	1,308	\$ 62,202
					IBC	1390 W Main St	Elec Gen Pri Rate GPD Com	100018830008	82518997	10/27/10
11/30/10	138									\$ 86
01/03/11	623									\$ 93
01/29/11	728									\$ 105
03/01/11	732									\$ 106
03/29/11	497									\$ 78
04/28/11	449									\$ 73
05/26/11	378									\$ 70
06/28/11	521									\$ 90
	07/27/11	618			\$ 102					
	08/25/11	469			\$ 80					
	09/27/11	464			\$ 72					



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Water Base Line Year												
Facility	Address	Account No.	Dec-10	Actual cost	Mar-11	Actual cost	Jun-11	Actual cost	Sep-11	Actual cost	Total	Total
IBC	1727 Bluewater Hwy #Smal	3643010000	2,982	\$ 7,007.70	2,802	\$ 6,584.70	2,830	\$ 6,650.50	2,850	\$ 6,697.50	11,464	\$ 26,940.40
IBC	1727 Bluewater Hwy #Big	3643000000	12,600	\$ 29,610.00	11,260	\$ 26,461.00	10,775	\$ 25,321.25	11,515	\$ 27,060.25	46,150	\$ 108,452.50
IBC (Dorm)	801 Wall	3638060000	1,260	\$ 2,961.00	1,209	\$ 2,841.15	1,404	\$ 3,299.40	1,573	\$ 3,696.55	5,446	\$ 12,798.10
IBC (Dorm)	801 Wall	3638050000	395	\$ 928.25	370	\$ 869.50	495	\$ 1,163.25	535	\$ 1,257.25	1,795	\$ 4,218.25

Utility Rate	Energy Efficiency	Transportation	Gas Charges					
			Customer Charge	Gas Distribution	Energy Optimization	Interim Increase	Gas Cost Recovery	Total per unit
LT-1	0.1601	0.6276				\$0.021800		\$0.809500
GS-2 Com			\$18.20/month	\$1.939739	\$0.159935	\$0.063192	\$5.450163	\$7.613029
GS-3 Com			\$180.33/month	\$1.004302	\$0.111997264		\$6.3474008	\$7.463700

Gas Base Year

Facility Name	Address	Utility Rate	Meter No.(s)	Billing Month 2011	Unit	Total \$ Due	\$/Unit
IBC	1727 Bluewater Hwy	GS-3 Com	8267304	Jan-11	8,238.0	\$65,084.90	\$7.900571
				Feb-11	7,090.0	\$56,580.36	\$7.980305
				Mar-11	6,555.0	\$50,031.91	\$7.632633
				Apr-11	5,880.0	\$44,427.55	\$7.555706
				Apr-11	1,462.0	\$11,092.26	\$7.587045
				May-11	2,742.7	\$16,268.84	\$5.931688
				Jun-11	1,718.6	\$10,559.46	\$6.144222
				Jul-11	925.4	\$5,986.15	\$6.468716
				Aug-11	971.7	\$6,060.61	\$6.237121
				Sep-11	1,178.5	\$7,115.24	\$6.037539
				Oct-11	3,339.6	\$19,075.97	\$5.712052
				Nov-11	5,615.4	\$30,418.96	\$5.417060
	Dec-11	7,590.3	\$39,514.60	\$5.205934			
IBC Dorm		LT-1	40187285	Jan-11	17.5	\$94.32	\$5.389714
				Feb-11	14.8	\$80.05	\$5.408784
				Mar-11	17.4	\$89.94	\$5.168966
				Apr-11	18.3	\$96.76	\$5.287432
				May-11	17.0	\$91.98	\$5.410588
				Jun-11	17.3	\$95.45	\$5.517341
				Jul-11	14.8	\$82.03	\$5.542568
				Aug-11	14.0	\$74.82	\$5.344286
				Sep-11	13.8	\$72.50	\$5.253623
				Oct-11	14.3	\$74.69	\$5.223077
				Nov-11	16.4	\$82.00	\$5.000000
					Dec-11	14.8	\$71.37

Section 3: Energy Conservation Measures

Based on conversations with DTMB and MDOC, the following are the recommended ECM's for IBC. ECM#1 is based on the 15 year option. ECM #2 through 5 can be part of the 12 or 15 year package.

- ECM #1: Heating Upgrade**
- ECM #2: Lighting Upgrade**
- ECM #3: Building Envelope**
- ECM #4: Water and Sewer Conservation and Water Cooled Condenser Replacement**
- ECM #5: Energy Management System Upgrade/Expansion**

Construction Cost Estimate

Client MDOC and DTMB
Project IBC and Dormitory
Location Ionia, MI

Estimate/Rev. Date: 2-13-13
Contract #: Y12299

	Qty.	Unit	Unit Cost	Total
LIGHTING UPGRADE				
(1) Relamps	1	LS	\$6,687	\$6,687
(2) Relamp/Reballast	1	LS	\$173,863	\$173,863
(3) Reflector Retrofits	1	LS	\$133,741	\$133,741
(4) New fixtures	1	LS	\$73,557	\$73,557
(5) LED	1	LS	\$267,481	\$267,481
(6) Occupancy sensors	1	LS	\$13,374	\$13,374
TOTAL LIGHTING UPGRADE			\$668,703	
BUILDING ENVELOPE				
(1) Weather-stripping, roof/wall sealing	1	LS	\$35,350	\$35,350
(2)				\$0
TOTAL BUILDING ENVELOPE			\$35,350	
WATER/SEWER CONSERVATION				
(1) Inmate Flush Valves	1	LS	\$1,031,653	\$1,031,653
(2) Inmate Lavatory Valves	1	LS	\$515,826	\$515,826
(3) Inmate Shower Valves	1	LS	\$195,658	\$195,658
(4) Staff Valves	1	LS	\$35,574	\$35,574
TOTAL WATER/SEWER CONSERVATION			\$1,778,712	
ENERGY MANAGEMENT SYS. UPGRADE/EXPANSION/VARIABLE SPEED DRIVES				
(1) IBC: Program., software, training, portable computer, VSD Points (EST)	1	LS	\$42,297	\$42,297
(2) VSD	2	LS	\$5,000	\$10,000
(3) Dorm: Control Point	1	LS	\$24,600	\$24,600
(4) Dorm: programming, engineering, software	1	LS	\$5,000	\$5,000
TOTAL ENERGY MANAGEMENT SYS. UPGRADE/EXPANSION/VARIABLE SPEED DRIVES			\$81,897	

Estimates +/- 10% and are based on Means, past experience, vendor pricing and contractor review.

The above is a summary of the estimated costs for the proposed ECM's. Further information can be found in the write up and description for each section. The above are for budgetary purposes only.

ECM #1: Heating Upgrade

ECM #1 is Optional and based on 15 year Financing.

RECOMMENDED ACTION

Install a stand-alone steam boiler system for dorm eliminating the need for the steam and condensate piping from the central boiler plant.

See **Central Boiler Plant ECM #1- Boiler Decentralization** for cost and savings.

EXISTING CONDITIONS

See **Central Boiler Plant ECM #1- Boiler Decentralization**

See **IBC and Dorm Correctional Facility Mechanical Equipment Matrix**

PROPOSED SYSTEMS

See **Central Boiler Plant ECM #1- Boiler Decentralization**

(Summary: install steam boiler, new piping, separate boiler building)

IBC and Dorm Mechanical Equipment Matrix

Key

AHU	Air Handling Unit
DDC	Direct Digital Controls (computer control)
DWH	Domestic Water Heater
EMS	Energy Management System
FTR	Finned Tube Radiation
HP	Horsepower of Motor(s)
HVAC	Heat, Ventilating, Air Conditioning Equipment (AHU, pumps, air conditioning, heat exchangers)
HW	Hot Water heating
HX	Heat Exchanger
MUAU	Make Up Air Unit (used to provide 100% outside air for ventilation or exhaust)
MZ	Multizone Air Handler (outdated type of heating and cooling system)
PNEU	Pneumatic control
VAV	Variable Air Volume Air Handler (type of heating and cooling system)
VFD	Variable Frequency Drive (controls speed of motor)

Facility	Equip.	Serves	Install Date	HP (Qty.) /Hp ea.	Design Airflow (CFM)/ % OA	Cooling (Tons)	Equipment Service Life*1 (years)	Comments	ECM included in scope of work
Admin. (bldg.. 100)	(2) hot water boilers	Admin	1998				Existing age 12 Expected Life 25 Remaining 13	(2) boilers with modulating burners Original design called for boiler operation during summer for reheat. This is not required and the boilers are shut off in the summer causing an alarm on the EMS	Revise existing sequences of operation of EMS ECM #5: Energy Management System Upgrade/Expansion
Admin. (bldg.. 100)	(5) Pumps	FTR, AHU, UH,	1998	(1) 1/8 (2) 1 (1) 3/7 (1) 2			Existing age 12 Expected Life 20 Remaining 8	Pumps run continuously	Revise existing sequences of operation of EMS ECM #5: Energy Management System Upgrade/Expansion
Admin. (bldg.. 100)	AHU-VAV	Admin.	1998	30/15	24,100/	87	Existing age 12 Expected Life 20 Remaining 8	Ductwork in several locations is leaking and has been repaired possible due to over pressurization.	Install pressure high limits and revise sequence or operation of EMS ECM #5: Energy Management System Upgrade/Expansion
Admin. (bldg.. 100)	Cabinet unit heaters	Rooms, entrance	1998				Existing age 12 Expected Life 20 Remaining 8	Some cabinet unit heaters are located in occupied areas (lobby and training room) and have a separate thermostat possible trying to cool while the thermostat controlling the VAV box is trying to cool the room	Add CUH to EMS and revise sequence of operation. ECM #5: Energy Management System Upgrade/Expansion



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*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

Facility	Equip.	Serves	Install Date	HP (Qty.) /Hp ea.	Design Airflow (CFM)/ % OA	Cooling (Tons)	Equipment Service Life*1 (years)	Comments	ECM included in scope of work
Admin. (bldg. 100)	Pumps	Building heating	1998	¾ to 2 hp			Existing age 12 Expected Life 20 Remaining 8	Due to control programming hot water pumps run continuously (24 hours/day, 365 days/yr.)	Revise programming and sequence of operation to shut off pumps during summer. ECM #5: Energy Management System Upgrade/Expansion
Health/ Kitch./Seg (bldg. 300)	(2)Boilers	Building heating	1998				Existing age 12 Expected Life 25 Remaining 13	(2) boilers with modulating burners	No Work
Health/ Kitch./Seg (bldg. 300)	Multizone	Health	1998	10/3	8300/ 20%	28	Existing age 12 Expected Life 20 Remaining		No Work
Health/ Kitch./Seg (bldg. 300)	AHU	Dining	1998	20/7.5	23,000/ 40%		Existing age 12 Expected Life 20 Remaining		No Work
Health/ Kitch./Seg (bldg. 300)	AHU	Kitchen	1998	15	13,500/ 100%		Existing age 12 Expected Life 20 Remaining		No Work
Health/ Kitch./Seg (bldg. 300)	AHU	Seg. cells	1998	5/3	6,000/ 50%		Existing age 12 Expected Life 20 Remaining		No Work
Health/ Kitch./Seg (bldg. 300)	AHU F&B	Kitchen make up air	1998	5	5760/ 100%		Existing age 12 Expected Life 20 Remaining		No Work
Health/ Kitch./Seg (bldg. 300)	(10) pumps	AHU, primary, DHW, UH Heating pumps	1998	(3) 2 hp (2) 5 hp (2) 1/4 (1) ¾ (1) 1 ½ (1) 2			Existing age 12 Expected Life 20 Remaining 8		No Work
Gym/ Educ. (bldg. 200)	Boiler		1998				Existing age 12 Expected Life 25 Remaining 13	(1) boiler with atmospheric burner	No Work
Gym/ Educ. (bldg. 200)	VAV AHU	Class	1998	25/7.5	19,400/ 30%	80	Existing age 12 Expected Life 20 Remaining	VAV with reheats and finned tube.	No Work
Gym/ Educ. (bldg. 200)	AHU	Gym	1998	3/1	7500/ 40%	--	Existing age 12 Expected Life 20 Remaining		No Work
Gym/ Educ. (bldg. 200)	AHU	Stor./ weights	1998	5/3	3400/ 40%		Existing age 12 Expected Life 20 Remaining		No Work

Facility	Equip.	Serves	Install Date	HP (Qty.) /Hp ea.	Design Airflow (CFM)/ % OA	Cooling (Tons)	Equipment Service Life*1 (years)	Comments	ECM included in scope of work
Gym/ Educ. (bldg. 200)	(9) heating pumps	Htg., DHW, AHU-1, AHU-2, AHU-3, FTR	1998	(2) 7.5 (1) 1/6 (1) ¾ (1) ½ (1) 1 ½ (2) 1			Existing age 12 Expected Life 20 Remaining 8		
Inmate cells (HSU-1 to 7)	Boiler		1998	--			Existing age 12 Expected Life 25 Remaining 13	(1) boiler with atmospheric burner	No Work
Inmate cells (HSU-1 to 7)	AHU	Inmate cells zone 1	1998	7.5/5	7260/40%		Existing age 12 Expected Life 20 Remaining		No Work
Inmate cells (HSU-1 to 7)	AHU	Inmate cells zone 2	1998	7.5/5	7260/40%		Existing age 12 Expected Life 20 Remaining		No Work
Inmate cells (HSU-1 to 7)	Multizone	Control room level	1998	7.5/3	6200/40%		Existing age 12 Expected Life 20 Remaining		No Work
Inmate cells (HSU-1 to 7)	HW pumps	Hot water	1998	¾ to 5 hp			Existing age 12 Expected Life 20 Remaining 8	(2) primary pumps (1 stand by) (6) secondary pumps (3 zones with 2 pumps each zone)	No Work
Inmate cells (HSU-1 to 7)	Heat pump	Control room	1998	--		¾ tons	Existing age 12 Expected Life 20 Remaining 8	Heat pumps have been failing regularly and replaced with standard air conditioning units.	No Work
MSI	Furnace	Office	2002	fract	1950	5 tons	Existing age 12 Expected Life 20 Remaining 8		No Work
MSI	Make up air handler	Exhaust make up	2002	15	30,000/100%		Existing age 12 Expected Life 20 Remaining 8	Flexible ductwork connected to unit is ripped and leaking air. Used for make up air for dust collector	
MSI	Radiant tube heaters	Plant heating	2002				Existing age 12 Expected Life 20 Remaining 8		
MSI	Split system	Office htg/clg	2002	Fract.			Existing age 12 Expected Life 20 Remaining 8		
MSI	(10) exhaust fans		2002	1	10,000/ea.		Existing age 12 Expected Life 20 Remaining 3		
MSI	Wall Supply fan		2002	7.5	43,000		Existing age 12 Expected Life 20 Remaining 8		

Facility	Equip.	Serves	Install Date	HP (Qty.) /Hp ea.	Design Airflow (CFM)/ % OA	Cooling (Tons)	Equipment Service Life*1 (years)	Comments	ECM included in scope of work
MSI	Wall supply fan		2002	5	31,000		Existing age 12 Expected Life 20 Remaining 8		
MSI	Dust Collect.	Wood shop	2002	100/15 /3/3	28,000		Existing age 12 Expected Life 20 Remaining 8	100 hp exhaust fan/ 15 hp transfer fan/ 3 hp rotary air lock fan/3 hp silo unloader	
Old Dorm	Htg		1953				Existing age 12 Expected Life 20 Remaining 8	Existing steam radiators. Steam from central plant. Ventilation from windows-no forced air. Temperature control is poor with reports of windows open in the winter	
Unit C (New Dorm Building)	(4) Htg. Pump	Htg.	1990's	Fract			Existing age 12 Expected Life 20 Remaining	Building is hot water heating with steam to hot water heat exchanger .	

Note: *1 Service life taken from ASHRAE where listed. Expected life has been adjusted for some equipment (ex: domestic water heaters) based on correctional usage. Where equipment is not listed expected life is based on similar equipment or experience.

Table 4 Comparison of Service Life Estimates

Equipment Item	Median Service Life, Years		Equipment Item	Median Service Life, Years		Equipment Item	Median Service Life, Years	
	Abramson et al. (2005)	Akalin (1978)		Abramson et al. (2005)	Akalin (1978)		Abramson et al. (2005)	Akalin (1978)
Air Conditioners			Air Terminals			Condensers		
Window unit	N/A*	10	Diffusers, grilles, and registers	N/A*	27	Air-cooled	N/A	20
Residential single or split package	N/A*	15	Induction and fan-coil units	N/A*	20	Evaporative	N/A*	20
Commercial through-the-wall	N/A*	15	VAV and double-duct boxes	N/A*	20	Insulation		
Water-cooled package	>24	15	Air washers	N/A*	17	Molded	N/A*	20
Heat pumps			Ductwork	N/A*	30	Blanket	N/A*	24
Residential air-to-air	N/A*	15 ^b	Dampers	N/A*	20	Pumps		
Commercial air-to-air	N/A*	15	Fans	N/A*		Base-mounted	N/A*	20
Commercial water-to-air	>24	19	Fans	N/A*	25	Pipe-mounted	N/A*	10
Roof-top air conditioners			Centrifugal	N/A*	20	Sump and well	N/A*	10
Single-zone	N/A*	15	Axial	N/A*	20	Condensate	N/A*	15
Multizone	N/A*	15	Propeller	N/A*	15	Reciprocating engines	N/A*	20
Boilers, Hot-Water (Steam)			Ventilating roof-mounted	N/A*	20	Steam turbines	N/A*	30
Steel water-tube	>22	24 (30)	Coils			Electric motors	N/A*	18
Steel fire-tube		25 (25)	DX, water, or steam	N/A*	20	Motor starters	N/A*	17
Cast iron	N/A*	35 (30)	Electric	N/A*	15	Electric transformers	N/A*	30
Electric	N/A*	15	Heat Exchangers			Controls		
Burners	N/A*	21	Shell-and-tube	N/A*	24	Pneumatic	N/A*	20
Furnaces			Reciprocating compressors	N/A*	20	Electric	N/A*	16
Gas- or oil-fired	N/A*	18	Packaged Chillers			Electronic	N/A*	15
Unit heaters			Reciprocating	N/A*	20	Valve actuators		
Gas or electric	N/A*	13	Centrifugal	>25	23	Hydraulic	N/A*	15
Hot-water or steam	N/A*	20	Absorption	N/A*	23	Pneumatic	N/A*	20
Radiant heaters			Cooling Towers			Self-contained		10
Electric	N/A*	10	Galvanized metal	>22	20			
Hot-water or steam	N/A*	25	Wood	N/A*	20			
			Ceramic	N/A*	34			

*N/A: Not enough data yet in Abramson et al. (2005). Note that data from Akalin (1978) for these categories may be outdated and not statistically relevant. Use these data with caution until enough updated data are accumulated in Abramson et al.

The service life of mechanical equipment where referenced to is taken from the above chart from ASHRAE (American Society of Heating, Refrigeration, and Air-conditioning Engineers). Our analysis includes no operational savings but this chart is useful to help in identifying potential energy conservation measures with operational or capital improvements. This chart is a general guide and many factors from original manufacturer to installation quality and maintenance must be considered.

ECM #2 – LIGHTING UPGRADES

RECOMMENDED ACTION

We recommend retrofitting the existing interior lighting with new, higher efficient lighting systems.

Estimated Energy Savings = 898,356 KWH/yr.

Estimated Cost savings = \$81,122 Dollars/yr.

Implementation Cost = \$967,603

Implementation costs includes design and engineering, project management, contingency, performance, overhead and profit.

*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

EXISTING CONDITIONS

IBC's existing lighting system consists of a blend of multiple generations of technology. Both 4 foot and 8 foot T12 and T8 lamps exist throughout the facility. T12 ballasts are a mixture of PCB containing standard magnetic, and non-PCB containing energy saving magnetic, while T8 ballasts are first generation electronic. There are also a number of high pressure sodium and metal halide high intensity discharge fixtures with magnetic ballasts throughout the buildings.

PROPOSED SYSTEMS

Proposed lighting energy conservation measures will address 5,990 fixtures and create an upgraded fixture count of 5,722, detailed in the room by room section. A combination of replacing, relamping, reballasting, and retrofitting existing fixtures with 28 watt T8 lamps and the latest generation of high efficiency electronic ballasts. Specular reflectors will be used to retrofit and delamp wherever possible to reduce the overall quantity of lamps and ballasts throughout the facilities. Existing HID fixtures will be replaced with high bay fluorescent fixtures with high output T5 lamps and electronic ballasts. The combination of more efficient technology, standardized lamps and ballasts, and a new lighting system that will not need to be maintained for several years will result not only significant energy savings, but reduced operational and maintenance costs as well. The proposed system will comply with all applicable codes, rules, regulations and IES standards.

SAVINGS CALCULATIONS

Lighting

Refer to room by room chart for values

$$\text{KWH savings} = (\text{Existing Watts/fixture} \times \text{Existing quantity of fixtures} - \text{Proposed Watts/Fixture} \times \text{Proposed quantity of fixtures}) / 1000 \text{ KWH/Watt} \times \text{Hours}$$

$$\text{\$ Savings} = \text{KWH savings} \times \text{\$/KWH}$$

Occupancy Sensors

$$\text{KWH savings Occupancy Sensor} = \text{Proposed Watts/fixture} \times \text{Proposed quantity of fixtures} \times (\text{non occupancy sensor operating hours} - \text{occupancy sensor operating hours})$$

$$\text{\$ Savings} = \text{KWH savings Occupancy sensor} \times \text{\$/KWH}$$

SCOPES

100 BUILDING (ADMINISTRATION)

Existing 2x4 (3) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts. Certain existing 2x4 (3) T8 lamp troffers, with low annual hours of operation, will be relamped and rebalasted with F8T8 lamps and high efficiency electronic ballasts.

Existing 2x4 (2) T8 lamp troffers will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2x2 (2) T8 u-bend lamp troffers will be retrofitted with specular reflectors, F17T8 lamps and high efficiency electronic ballasts.

Existing 1x4 (2) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Certain existing 1x4 (2) T8 lamp troffers, with low annual hours of operation, will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 4' (1) and (2) T8 lamp fixtures will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2' (2) T8 lamp strip fixtures are energy efficient and nothing will be done.

Exterior (Attached to Building) – Existing 4' (2) T8 lamp vapor tight fixtures will be relamped and rebalasted with F32T8 lamps and high efficiency electronic ballasts.

Exterior (Attached to Building) – Existing high pressure sodium wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers and integral photocells.

200 BUILDING (FOOD SERVICE, MEDICAL, SEGREGATION HOUSING)

Existing 2x4 (3) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Existing 2x4 (2) T8 lamp troffers will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2x2 (2) T8 u-bend lamp troffers will be retrofitted with specular reflectors, F17T8 lamps and high efficiency electronic ballasts.

Existing 1x4 (2) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Certain existing 1x4 (2) T8 lamp troffers, with low annual hours of operation, will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 4' (2) T8 lamp fixtures will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2' (2) T8 lamp strip fixtures are energy efficient, nothing will be done.

Existing CFL fixtures are energy efficient, nothing will be done.

Exterior – Existing high pressure sodium wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers and integral photocells.

Exterior (Attached to Building) – Existing high pressure sodium lamp recessed can fixtures will be retrofitted with specular reflectors, CFL lamps and high efficiency electronic ballasts.

300 BUILDING (EDUCATION)

Existing 2x4 (4) T8 lamp high bay fixtures will be relamped with F28T8 lamps.

Existing 2x4 (3) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Certain existing 2x4 (3) T8 lamp troffers, with low annual hours of operation, will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2x2 (2) T8 u-bend lamp troffers will be retrofitted with specular reflectors, F17T8 lamps and high efficiency electronic ballasts.

Existing 1x4 (2) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Certain existing 1x4 (2) T8 lamp troffers, with low annual hours of operation, will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 4' (1) and (2) T8 lamp fixtures will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2' (2) T8 lamp strip fixtures are energy efficient, nothing will be done.

Exterior (Attached to Building) – Existing high pressure sodium lamp recessed can fixtures will be retrofitted with specular reflectors, CFL lamps and high efficiency electronic ballasts.

400 BUILDING (MSI)

Existing metal halide high bay and low bay fixtures will be replaced with new high bay fixtures with specular reflectors, T5HO lamps and high efficiency electronic ballasts.

Existing high pressure sodium fixtures will be replaced with new LED fixtures with high efficiency electronic drivers.

Existing 4' (2) T8 lamp fixtures will be relamped and rebalasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 8' (2) T8HO lamp vapor tight fixtures are energy efficient, nothing will be done.

Exterior – Existing high pressure sodium wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers and integral photocells.

500 BUILDING (MAINTENANCE)

Existing high pressure sodium low bay and cylinder fixtures will be replaced with new low bay fixtures with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Existing 2x4 (4) and (6) T8 lamp high bay fixtures will be relamped with F28T8 lamps.

Existing 4' (1), (2) and (4) T8 lamp fixtures will be relamped and reballasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2' (2) T8 lamp strip fixtures are energy efficient, nothing will be done.

Exterior (Attached to Building) – Existing high pressure sodium wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers and integral photocells.

HOUSING UNITS 1-7 (RECOMMENDATIONS TYPICAL FOR ALL UNITS)

Existing 2x4 (3) T8 lamp troffers will be retrofitted with specular reflectors, F28T8 lamps and high efficiency electronic ballasts.

Existing 2x2 (2) T8 u-bend lamp troffers will be retrofitted with specular reflectors, F17T8 lamps and high efficiency electronic ballasts.

Existing 4' (2) T8 lamp fixtures will be relamped and reballasted with F28T8 lamps and high efficiency electronic ballasts.

Existing 2' (2) T8 lamp strip fixtures are energy efficient, nothing will be done.

Existing CFL fixtures are energy efficient, nothing will be done.

Exterior (Attached to Building) – Existing high pressure sodium wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers and integral photocells.

Exterior (Attached to Building) – Existing high pressure sodium lamp recessed can fixtures will be retrofitted with specular reflectors, CFL lamps and high efficiency electronic ballasts.

GUARD TOWERS A & B (RECOMMENDATIONS TYPICAL FOR BOTH UNITS)

Existing 4' (4) T8 lamp fixtures will be relamped and reballasted with F28T8 lamps and high efficiency electronic ballasts.

Existing incandescent flood lamps will be relamped with new LED flood lamps.

Existing CFL fixtures are energy efficient, nothing will be done.



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*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

SITE LIGHTING OPTION

Existing 400 watt high pressure sodium flood fixtures will be replaced with new LED flood fixtures with high efficiency electronic drivers and integral photocells.

Existing 250 watt high pressure sodium shoebox fixtures are already being standardized to induction lighting technologies by site maintenance. The State of Michigan does not allow these retrofits with a state permit being pulled because of U.L. certification. Consequently, these fixtures will have nothing done.

Existing induction fixtures are energy efficient, nothing will be done.

OCCUPANCY SENSOR OPTION

There is good opportunity to install occupancy sensors (in non-inmate areas) throughout the prison complex buildings. Many areas have long hours of operation and the use of occupancy sensors will allow these areas with lower occupancy to reduce lighting energy consumption.

Types of occupancy sensors to be installed: wall mounted, ceiling mounted low voltage, ceiling mounted line voltage and ceiling mounted dual technology.

Typical areas to have occupancy sensors installed:

Offices

Break Rooms

Rests

Training Rooms

Locker Rooms

Conferences

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC01	OFFICE	2,000	2	120	2	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	PARTS RM	2,470	14	144	14	128	HIGHBAY: 2'X4' WITH (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) HIGH POWER ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
BC01	PARTS RM	2,470	1	295	1	142	LOWBAY: WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, (1) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	PARTS RM	2,470	2	63	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	OFFICE	2,000	2	120	2	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	HALLWAY	2,470	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC01	HALLWAY	8,760	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	OFFICES	2,000	4	120	4	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	REST	2,470	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	REST	8,760	1	33	1	22	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 4' 32 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	TRUCK BAY	2,470	7	144	7	128	HIGHBAY: 2'X4' WITH (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) HIGH POWER ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
BC01	INMATE REST	1,500	3	63	3	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	INMATE REST	1,500	3	37	3	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC01	MECH	1,000	6	215	6	196	HIGHBAY: 2'X4' WITH (6) LINEAR 4' 32 WATT T8 LAMPS, AND (2) HIGH POWER ELECTRONIC BALLASTS	RELAMP WITH (6) LINEAR 4' 28 WATT T8 LAMPS
BC01	MECH	1,000	12	63	12	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	MECH	8,760	3	63	3	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	MEZZ LOUNGE	2,470	2	144	2	128	HIGHBAY: 2'X4' WITH (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) HIGH POWER ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
BC01	MEZZ LOUNGE	2,470	7	63	7	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	WARE HOUSE	1,000	18	295	18	142	CYLINDER: PENDANT MOUNTER WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, (1) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC01	WARE HOUSE	8,760	5	295	5	142	CYLINDER: PENDANT MOUNTER WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, (1) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	WARE HOUSE	1,000	1	144	1	128	HIGHBAY: 2'X4' WITH (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) HIGH POWER ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
BC01	WARE HOUSE TASK	1,000	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	OFFICE	2,000	2	120	2	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	OFFICE	2,000	2	120	2	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	LOCKER RM	1,500	1	63	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC01	CONNECTOR	1,500	2	120	2	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC01	STORAGE	500	12	144	12	128	HIGHBAY: 2'X4' WITH (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) HIGH POWER ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
BC01	EXTERIOR	4,380	10	188	10	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC02	MANUFACTURING	2,470	9	188	9	18	CANOPY: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	CANOPY: NEW REPLACEMENT FIXTURE WITH (1) 18 WATT LED LIGHT ENGINE, (1) ELECTRONIC DRIVER AND (1) PHOTOCCELL
BC02	MANUFACTURING	2,470	116	458	116	218	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (4) LINEAR 4' 54 WATT T5HO LAMPS, (1) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	MANUFACTURING	2,470	25	63	25	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	MANUFACTURING	8,760	25	63	25	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC02	MANUFACTURING MEZZ	2,470	40	205	40	109	LOWBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (2) LINEAR 4' 54 WATT T5HO LAMPS, (1) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OFFICE	2,000	2	63	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OFFICE	2,000	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OFFICE	2,000	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OFFICE	2,000	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OPEN OFFICE	2,470	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	LOCKER RM	2,470	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1)	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							ELECTRONIC BALLAST	
BC02	LOCKER RM	2,470	12	63	6	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	CUST	500	2	63	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OFFICE	2,000	4	63	2	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	OFFICE	2,000	4	63	2	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	STAFF REST	1,500	2	63	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	STAFF REST	1,500	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	FINISHING	2,470	46	182	46	182	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1)	LEAVE ALONE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							ELECTRONIC BALLAST	
BC02	FINISHING	8,760	12	182	12	182	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC02	SHIPPING	2,470	20	182	20	182	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC02	SHIPPING	8,760	4	182	4	182	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC02	SHIPPING	2,470	3	63	3	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	SHIPPING	8,760	3	63	3	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC02	COMPRESSORS	2,470	2	182	2	182	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC02	COMPRESSORS	8,760	1	182	1	182	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC02	EXTERIOR	4,380	13	295	13	70	WALLPACK: WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 70 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC03	SITE LIGHTING	4,380	151	458	151	143	FLOOD: WITH (1) 400 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC03	SITE LIGHTING	4,380	102	295	102	295	SHOEBOX: WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
BC03	SITE LIGHTING	4,380	10	295	10	295	SHOEBOX: WITH (1) 250 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
BC03	SITE LIGHTING	4,380	81	150	81	150	FLOOD: WITH (1) 150 WATT INDUCTION LAMP AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC04 VEND	VENDING	8,760	1	427	1	427	COLD VENDING MACHINE	LEAVE ALONE
BC05	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1)	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL



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Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LAMPS, AND (1) ELECTRONIC BALLAST	ELECTRONIC BALLAST
BC05	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC05	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC05	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC05	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC05	STAIR-WELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC05	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC05	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC06	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC06	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC06	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC06	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC06	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2)	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC06	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC06	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC06	STAIR-WELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC06	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC06	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC07	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC07	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC07	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC07	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC07	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC07	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC07	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2)	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC07	STAIRWELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC07	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC07	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC08	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC08	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC08	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC08	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2)	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC08	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC08	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC08	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC08	STAIR-WELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC08	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC08	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC09	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2)	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS,	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							AND (1) ELECTRONIC BALLAST	ELECTRONIC BALLAST
BC09	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC09	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC09	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC09	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC09	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC09	STAIR-WELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC09	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC09	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC10	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
								ELECTRONIC BALLAST
BC10	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC10	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC10	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC10	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LAMPS, AND (1) ELECTRONIC BALLAST	ELECTRONIC BALLAST
BC10	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC10	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC10	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC10	STAIRWELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC10	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC10	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC11	VESTIBULE	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	MULTI PURPOSE	6,550	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	LOBBY	8,760	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	CONTROL RM	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	MULTI PURPOSE	6,550	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	STORAGE	500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC11	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	MECH	1,000	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	MECH	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	ELEC	500	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC11	QUARTERMASTER	2,000	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	CONTROL LEVEL	8,760	17	63	17	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	KITCHEN	6,550	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	STAFF REST	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	STAFF REST	6,550	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	STAFF REST	6,550	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC11	STAFF LOUNGE	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC11	STAFF LOUNGE	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	LAUNDRY	6,550	2	63	1	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	LAUNDRY	6,550	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	JAIL CELLS (122)	2,000	122	63	122	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	JAIL CELLS (122)	2,000	122	15	122	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC11	JAIL CELLS (122)	2,000	122	7	122	7	7 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC11	HALLWAYS (4)	8,760	56	63	28	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	INMATE RESTS (4)	6,550	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	INMATE RESTS (4)	6,550	4	63	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2)	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	INMATE RESTS (4)	6,550	12	37	12	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC11	STAIRWELLS	8,760	12	63	12	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC11	EXTERIOR	4,380	4	188	4	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC11	EXTERIOR	4,380	1	128	1	36	CAN: RECESSED WITH (1) 100 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 32 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC12	WAITING AREA	6,550	20	63	20	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	WAITING AREA	8,760	14	63	14	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	VENDING	6,550	2	63	1	48	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X8' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	CUST	500	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RESTS	6,550	2	63	2	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RESTS	6,550	4	63	2	48	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X8' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	HALLWAY	6,550	8	63	8	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	HALLWAY	8,760	4	63	4	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RESTS (4)	1,500	4	63	4	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RESTS (4)	8,760	4	37	4	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	HEALTH	2,500	2	63	2	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OPEN OFFICE	2,500	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OPEN OFFICE	2,500	1	63	1	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICES	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	1	63	1	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	CONF.	2,000	5	95	5	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
								ELECTRONIC BALLAST
BC12	CONF.	8,760	1	95	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	KITCHENETTE	2,000	1	63	1	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	1	95	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OPEN OFFICE	2,500	10	95	10	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	MAIL RM	1,800	3	95	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	STAIR-WELLS	8,760	6	63	6	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	HALLWAY	3,000	15	63	15	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	HALLWAY	8,760	15	63	15	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICES	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OPEN OFFICE	2,500	27	95	27	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OPEN OFFICE	2,500	1	63	1	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	4	63	4	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	OFFICE	2,000	4	63	4	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	TRAINING	1,900	16	95	16	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RECORDS	1,500	8	95	8	63	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (3) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	CUST	500	1	33	1	25	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 4' 32 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	8	95	8	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	LOUNGE	2,500	8	63	8	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	RESTS	3,000	4	63	2	48	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X8' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RESTS	3,000	2	63	2	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	RESTS	3,000	2	63	2	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	ELEC	500	10	63	10	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	ELEC	8,760	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	SERVER	500	2	63	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	SERVER	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	OFFICE	2,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	MECH	1,000	9	63	9	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	MECH	8,760	3	63	3	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	SECURITY CHECK	6,550	4	63	4	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	HALLWAY	6,550	12	63	12	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	HALLWAY	8,760	5	63	5	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	12	95	12	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	SECURE AREA	6,550	8	95	8	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	CONTROL RM	6,550	8	63	8	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	INMATE RESTS	8,760	5	37	5	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC12	INMATE RESTS	1,500	5	63	5	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	CUST	500	1	63	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	VISITATION	3,200	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	VISITATION	3,200	13	95	13	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	MECH	1,000	2	63	2	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OPEN OFFICE	2,500	11	63	11	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	OFFICE	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	CONF.	1,800	8	63	8	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	ENTRY	6,550	1	63	1	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	STORAGE	500	2	63	2	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	STAIR-WELL	8,760	3	63	3	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC12	EXTERIOR	4,380	1	63	1	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC12	EXTERIOR	4,380	5	188	5	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC12 VEND	VEND- MISERS	8,760	4	427	4	427	COLD VENDING MACHINE	LEAVE ALONE
BC13	CAFÉ.	7,500	34	63	34	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	CAFÉ.	7,500	10	63	10	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	KITCHEN	7,500	40	63	40	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	KITCHEN	8,760	5	63	5	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OFFICE	4,000	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC13	KITCHEN	7,500	3	63	3	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OFFICES	2,000	4	63	4	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	HOODS	7,500	21	15	21	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC13	CUST	3,000	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	FOOD STORAGE	7,500	13	63	13	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	FOOD STORAGE	8,760	3	63	3	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	COOLERS	7,500	32	15	32	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC13	REST	7,500	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC13	REST	7,500	2	63	1	48	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR	TROFFER: UNIVERSAL 1'X8' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1)

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	REST	7,500	2	63	2	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	CONTROL RM	8,760	3	95	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	LOADING DOCK	4,000	6	63	3	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	LOADING DOCK	4,000	2	63	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	CUST	500	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	HALLWAY	7,500	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	UTENSIL STORAGE	7,500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							LAMPS, AND (1) ELECTRONIC BALLAST	ELECTRONIC BALLAST
BC13	HALLWAY	7,500	3	63	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	INMATE REST	7,500	3	37	3	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC13	INMATE REST	7,500	3	63	3	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	HALLWAY	7,500	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	COUNSELING	2,000	8	63	8	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	WAITING RM	7,500	3	95	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	HALLWAY	7,500	6	63	6	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1)

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	FILE RM	1,800	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	DENTAL EXAM RM	3,000	14	63	14	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	EXAM RM	3,000	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OFFICE	2,000	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	HALLWAY	7,500	11	63	11	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	HALLWAY	8,760	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OFFICES	2,000	12	95	12	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OPEN OFFICE	3,000	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	EXAM RM	3,000	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	X-RAY RM	3,000	8	95	8	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	KITCHEN	3,000	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	INMATE REST	1,500	5	63	5	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	INMATE REST	8,760	5	37	5	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC13	CUST	500	1	63	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	CUST	500	1	63	1	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OFFICE	2,000	3	95	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	PROPERTY RM	3,000	12	63	12	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	PROPERTY RM	8,760	5	63	5	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	JAIL CELLS (36)	2,000	36	63	36	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	JAIL CELLS (36)	2,000	36	15	36	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC13	HALLWAY	8,760	5	63	5	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC13	CONTROL RM	8,760	6	63	6	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	SHOWERS	8,760	2	63	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	OFFICE	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	CUST	500	1	63	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	STAIRWELL	8,760	4	63	4	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	MECH	1,000	23	63	23	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	MECH	8,760	6	63	6	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC13	STORAGE	500	3	63	3	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	ELEC	500	8	63	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC13	EXTERIOR	4,380	9	95	9	12	WALLPACK: WITH (1) 70 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 12 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
BC13	EXTERIOR	4,380	1	95	1	29	CAN: RECESSED WITH (1) 70 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	RETROFIT WITH SPECULAR REFLECTOR, (1) 26 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE INSTANT START ELECTRONIC BALLAST
BC14	GUARD TOWER	3,640	3	120	3	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC14	GUARD TOWER	3,640	2	75	2	14	PAR 30 75 WATT INCANDESCENT LAMP	RELAMP WITH (1) PAR30 14 WATT LED LAMP
BC14	GUARD TOWER	3,640	2	15	2	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC15	GUARD TOWER	3,640	3	120	3	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC15	GUARD TOWER	3,640	2	75	2	14	PAR 30 75 WATT INCANDESCENT LAMP	RELAMP WITH (1) PAR30 14 WATT LED LAMP
BC15	GUARD TOWER	3,640	2	15	2	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
BC16	HALLWAY	4,800	45	63	45	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	HALLWAY	8,760	14	63	14	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASSES	3,000	12	95	12	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASSES	3,000	12	95	12	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OFFICE	2,000	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OPEN OFFICE	2,500	9	95	9	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1)

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OFFICES	2,500	8	95	8	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	LIBRARY	4,800	24	95	24	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	HAZ MAT STORAGE	500	6	95	6	63	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (3) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASS	3,000	8	63	4	84	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	GYM	4,800	18	144	18	128	HIGHBAY: 2'X4' WITH (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) HIGH POWER ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
BC16	GYM	8,760	4	33	4	22	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 4' 32 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OFFICE	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC16	STAFF REST	1,500	1	63	1	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	STAFF REST	8,760	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC16	CUST	8,760	1	63	1	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	STAFF REST	1,500	1	63	1	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	STAFF REST	8,760	1	37	1	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC16	INMATE REST	8,760	4	37	4	37	STRIP: SURFACE MOUNTED WITH NARROW 2' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 2' 17 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LEAVE ALONE
BC16	INMATE REST	1,500	12	63	12	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	BARBER SHOP	4,800	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS,	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							AND (1) ELECTRONIC BALLAST	INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	HOBBY RM	3,000	8	95	8	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	QUIET RM	3,000	5	95	5	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	QUIET RM	8,760	1	95	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OFFICES	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OPEN OFFICE	2,500	8	95	8	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OPEN OFFICE	2,500	3	63	3	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
BC16	OFFICES	2,000	12	95	12	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	OFFICES	2,000	4	95	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASSES	3,000	24	95	24	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASSES	8,760	3	95	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASSES	3,000	22	95	22	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASSES	8,760	2	95	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	ACTIVE STORAGE	3,000	12	95	12	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
								ELECTRONIC BALLAST
BC16	ACTIVE STORAGE	3,000	2	63	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 U-BEND LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	CLASS	3,000	6	95	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	STORAGE	500	1	95	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	INMATE REST	1,500	1	95	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	STAIR-WELL	8,760	3	63	3	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	MECH	1,000	12	63	12	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	MECH	8,760	4	63	4	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty Fixt	Watts per Fixture	Existing Fixture	Proposed Fixture
							4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	ELEC	500	7	63	7	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	ELEC	8,760	1	63	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
BC16	EXTERIOR	4,380	5	188	5	35	WALLPACK: WITH (1) 150 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 35 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
			5,990		5,722			

ECM #3 - Building Envelope

RECOMMENDED ACTION

We recommend sealing all gaps, cracks, and holes using appropriate materials such as Fire Retardant, Poly Urethane Foam, caulks, and appropriate weather stripping.

Estimated Gas Savings	= 678 MCF/yr.
Estimated Gas Cost Savings	= \$4,142/yr.
Implementation Cost	= \$51,151

Implementation costs includes design and engineering, project management, contingency, performance, overhead and profit.

*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

EXISTING CONDITIONS

Air leakage is defined as: "the uncontrolled migration of conditioned air through the building envelope". Caused by pressure differences due to wind, chimney effect and mechanical systems, it has been shown to represent the single largest source of heat loss or gain through the building envelopes of nearly all types of buildings. Along with these effects on a building envelope, the following can enlarge the heat loss issues:

- a) Deteriorating door weather stripping can lead to a larger air transfer, creating heat loss that will cause increases in heating loads and heating costs.
- b) Seals around windows will corrode over time. This also leads to a larger transfer of conditioned air, causing increases in heating costs.
- c) Incorrect sealing at the roof/wall connection point on a building structure can also create heat loss and depressurize a building from the outside environment.

Many of these issues can be solved by creating better seals around doors, windows, roof/wall connections, etc.

Many of the doors and frames are in poor condition with rust holes making it impossible to adequately seal the door with weather stripping. Door and frame replacement are not included in this scope or work.

Some studies have shown that upwards of 20% to 40% of heat loss could be attributed to air leakage. Typical savings, however, tend to be in the 10% to 25% range. Beyond the realized utility savings costs, air leakage can also affect thermal comfort of occupant's air quality from exterior contaminants, moisture migration, and imbalance of mechanical systems.

PROPOSED SYSTEMS

There are two aspects of the proposed retrofit; first, sealing all doors and windows to create an airtight environment in both inmate and public occupied areas. Second, to seal all roof/wall connection points in the public occupied buildings.

SAVINGS CALCULATIONS

Building Envelope

The intention of this energy conservation measure is to seal the windows and doors that have a small gap which allows infiltration of air into the building. In addition there is a small gap between the roof and wall intersection which allows infiltration into the building. This calculation is fairly complicated and converts the size of the opening to a correlating amount of air flow (cfm) that can infiltrate through it then assumes this air is a heat loss to the building. No savings has been taken for cooling.

Facility	Natural Gas Heating Savings (MCF)	Natural gas \$/MCF	Total Savings
Bellamy Creek	678	\$ 6.11	\$ 4,142

Building Envelope/Air Leakage – Savings Calculations

Balance Point Temp (°F)		Temperature below which heating is required
Heating Season (Hours)		Hours below the Balance Point Temp based on average monthly bin data
Average OA Air Temp at Balance Point (°F)		Average outside air temperature at the balance point temp
Space Temp (°F)		Space temperate when occupied
Boiler Efficiency		Estimated boiler efficiency at average OA temp
Weather Location		MI-Detroit
Airflow Coefficient	21.66	cfm/ft ² /(PA). Calculated value based on scientific test and flow dynamics.
Wind in MPH	10.00	Average wind speed based on weather data
Pressure Differential (ΔP)	12.93	PA. Pressure difference at the average wind speed.
Pressure Factor	0.65	
Constant	1.08	Btuh/CFM/°F
Conversion factor	1,000,000	BTU/MCF

$$\text{Airflow (CFM)} = \text{Opening Area (sq.ft.)} \times \text{Airflow Coefficient} \times (\text{Pressure Differential})^{\text{Pressure Factor}}$$

The airflow is based on empirical formulas based on building pressurization techniques:

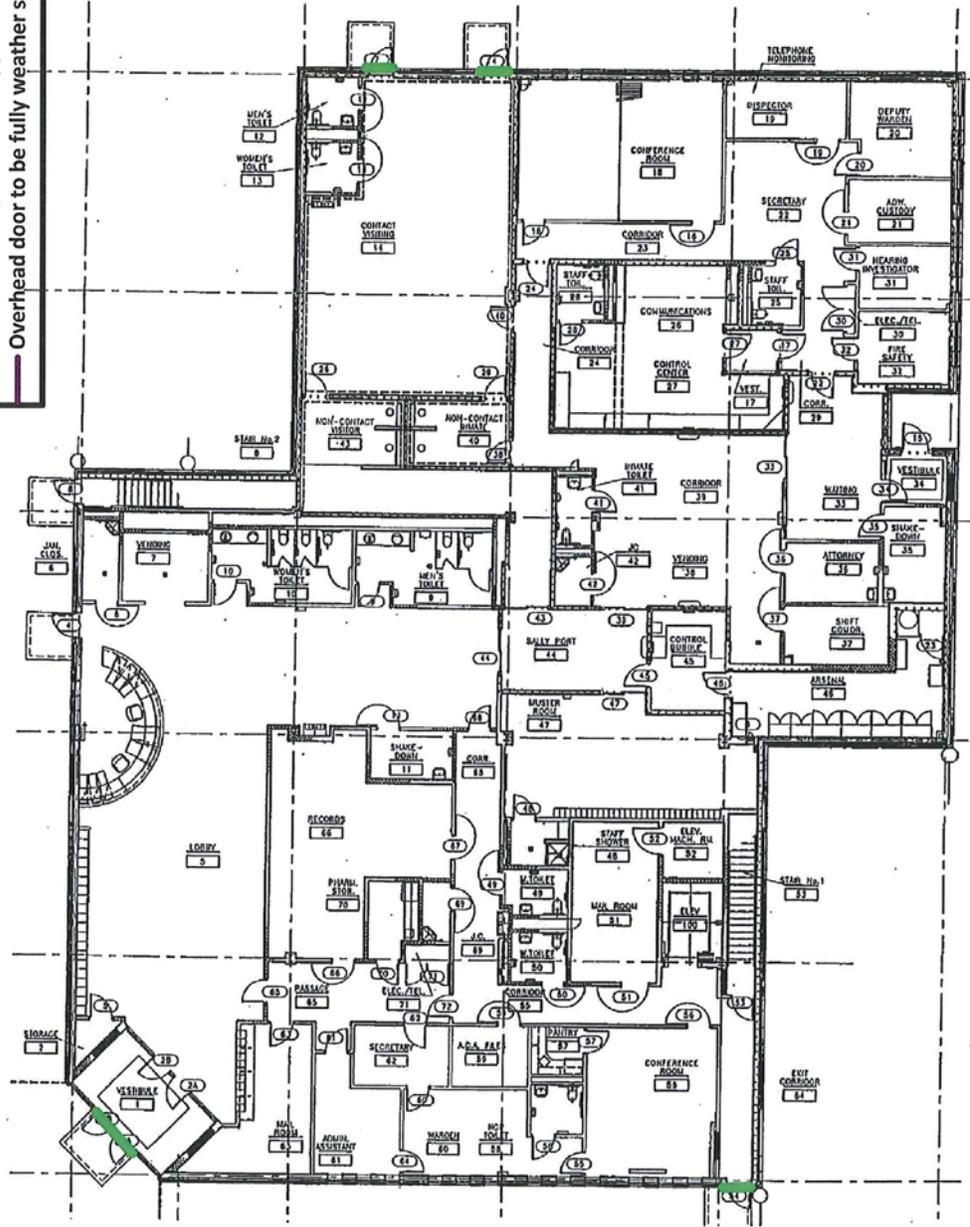
$$\text{Savings (MCF)} = \text{Airflow} \times 1.08 \text{ Btuh/CFM/F} \times \text{Heating Season Hours} \times \text{Temp Differential} / 1,000,000 \text{ BTU/MCF/ Boiler Efficiency}$$

Facility	Balance Point Temp (°F)	Heating Season (Hours)	Average OA Air Temp at Balance Point (°F)	Space Temp (°F)	Boiler Efficiency
Bellamy Creek	55	5188	35.5	72	87%

Facility	Description	Length (ft.)	Gap (in.)	Opening Area (ft ²)	Airflow (CFM)	Savings (MCF)
Bellamy Creek	doors	180	1/16	0.94	107	25.2
Bellamy Creek	MSI-roof/wall	1000	3/32	7.81	893	210.2
Bellamy Creek	MSI-doors	40	1/16	0.21	24	5.6
Bellamy Creek	MSI-OH doors	80	3/32	0.63	71	16.8
Bellamy Creek	Doors	700	3/32	5.47	625	147.1
Bellamy Creek	Doors	540	1/16	2.81	322	75.7
Bellamy Creek	OH doors	24	1/8	0.25	29	6.7
Bellamy Creek	Maint - Doors	240	1/16	1.25	143	33.6
Bellamy Creek	Maint- OH doors	144	3/32	1.13	129	30.3
Bellamy Creek	Doors - Housing	200	3/32	1.56	179	42.0
Bellamy Creek	Roof/wall	403	3/32	3.15	360	84.7

- Pipe Penetrations and Shafts
- Roof / Level Change
- Roof / Wall Connection
- Windows
- Door Sweeps Only
- Door to be fully weather stripped inc. sweeps
- Overhead door to be fully weather stripped

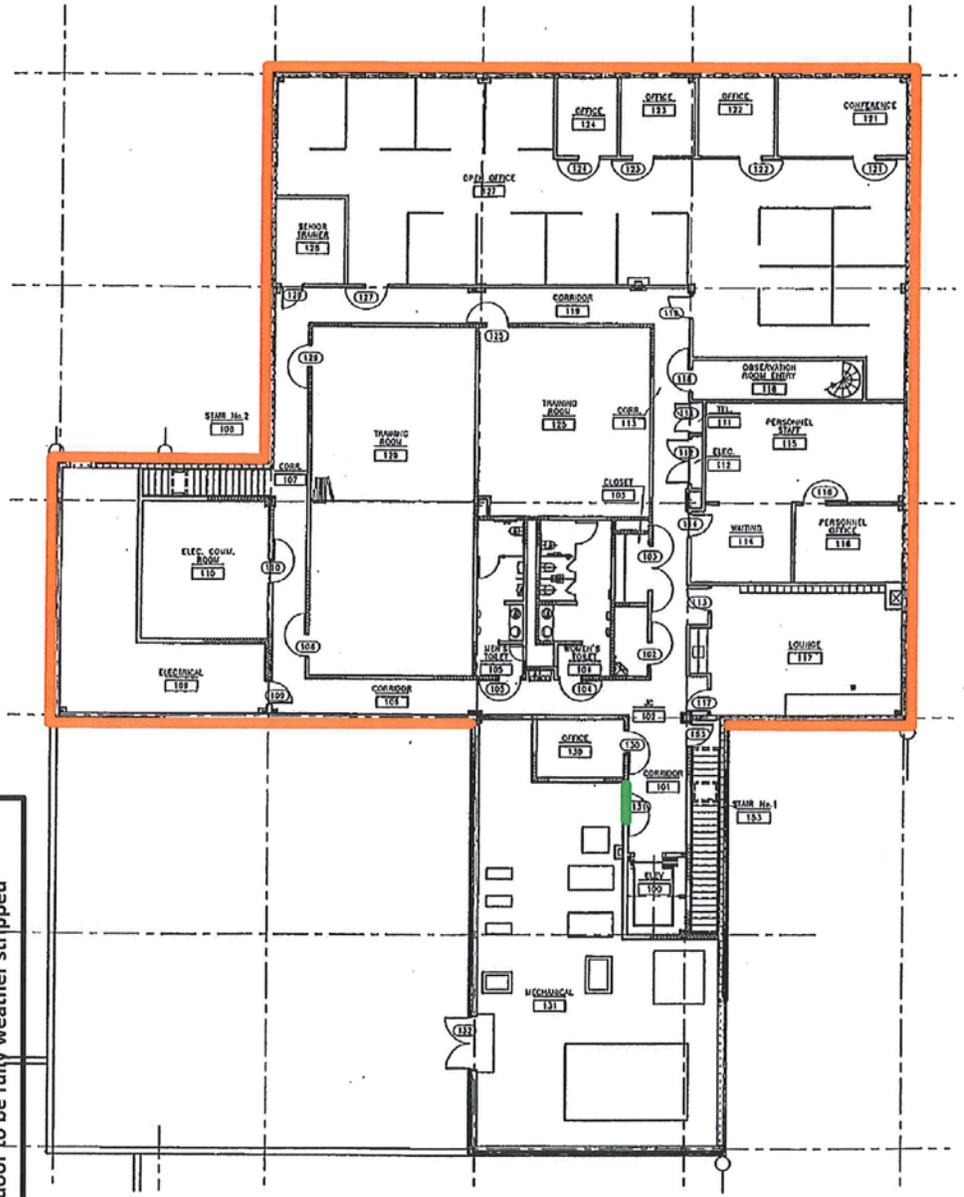
Ionia Correctional
 Pre Install
 9/28/12 ML



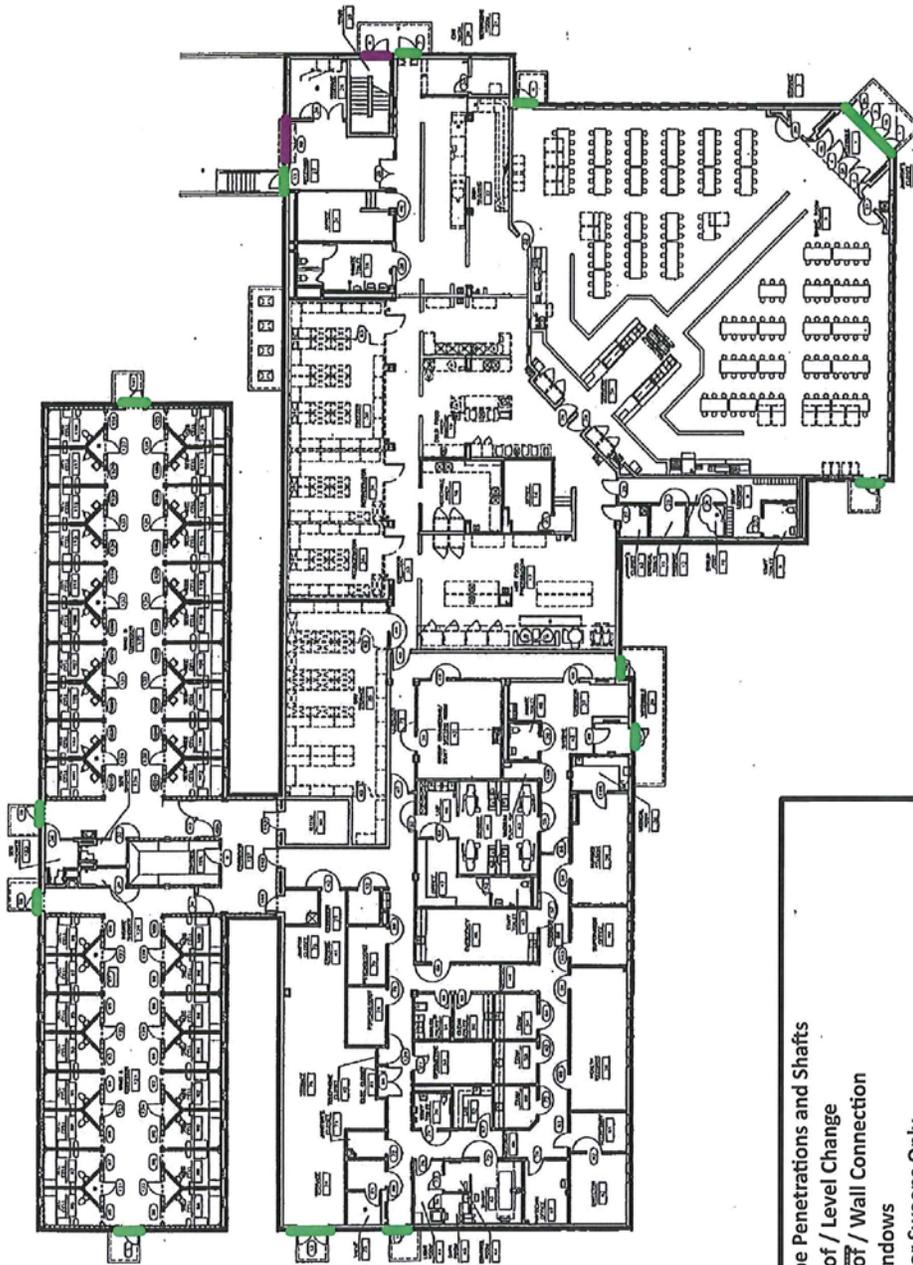
1st Floor Admin.

Ionia Correctional
Pre Install
9/28/12 ML

	Pipe Penetrations and Shafts
	Roof / Level Change
	Roof / Wall Connection
	Windows
	Door Sweeps Only
	Door to be fully weather stripped inc. sweeps
	Overhead door to be fully weather stripped



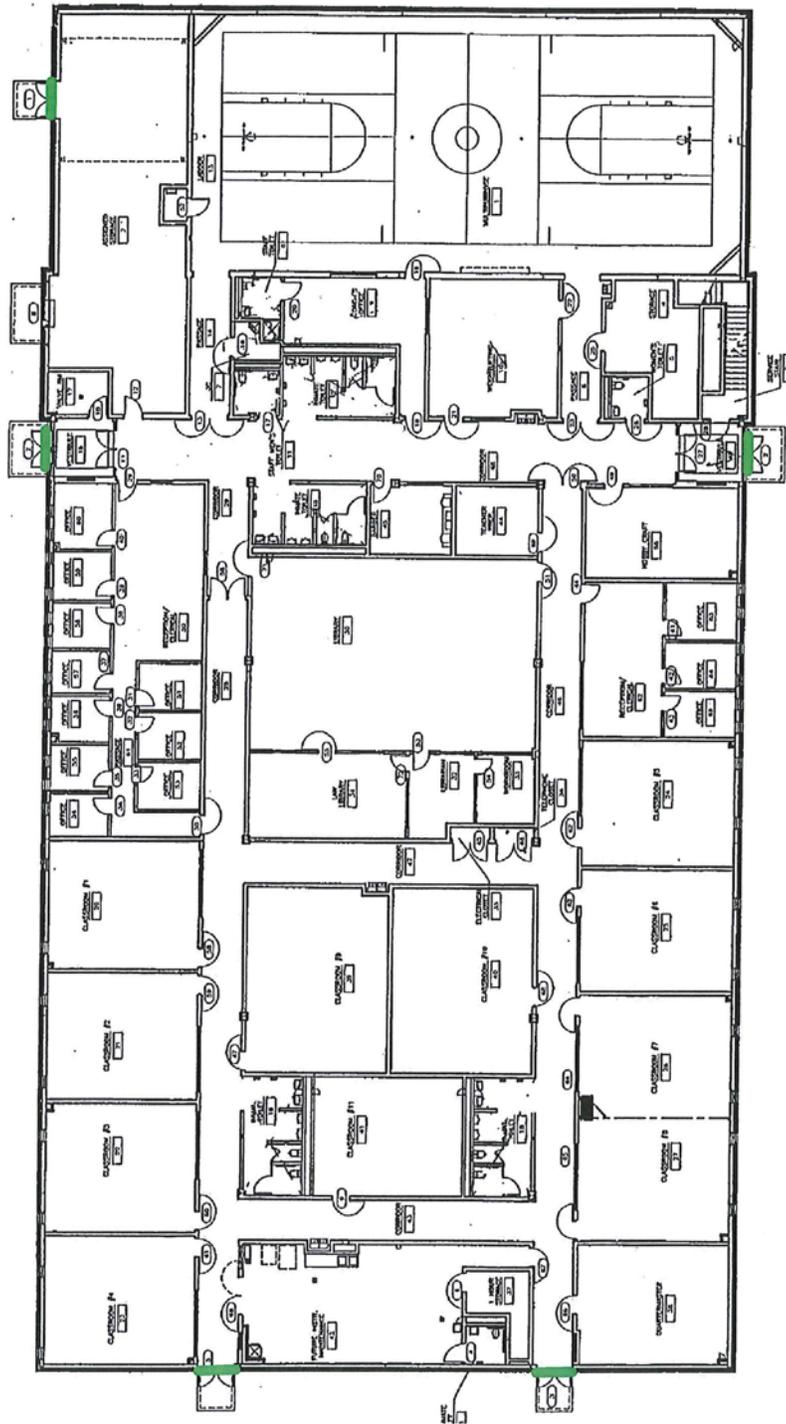
2ND FLOOR ADMIN.



- Pipe Penetrations and Shafts
- Roof / Level Change
- Roof / Wall Connection
- Windows
- Door Sweeps Only
- Door to be fully weather stripped inc. sweeps
- Overhead door to be fully weather stripped

Ionia Correctional
 Pre Install
 9/28/12 ML
 BID 200

*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

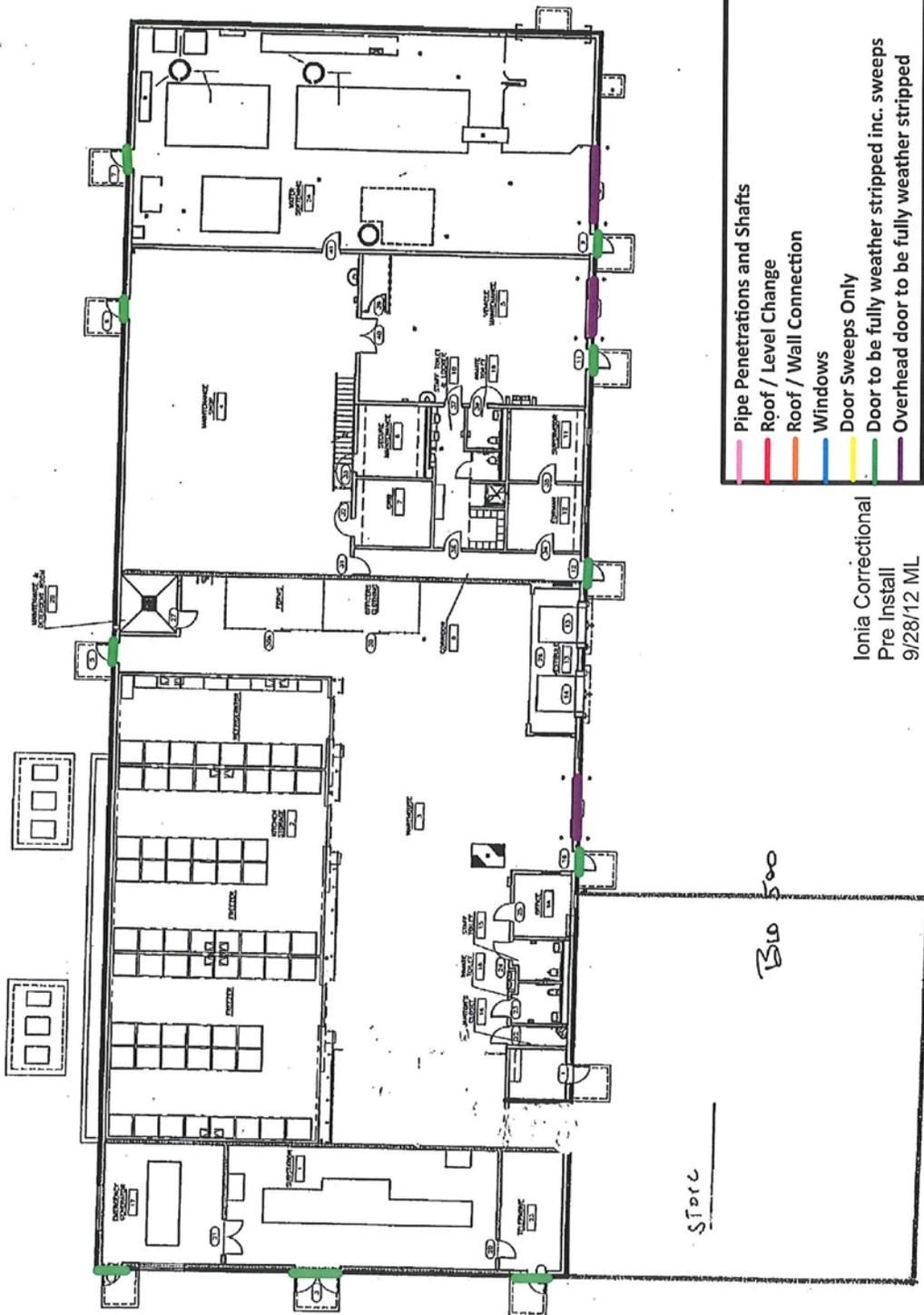


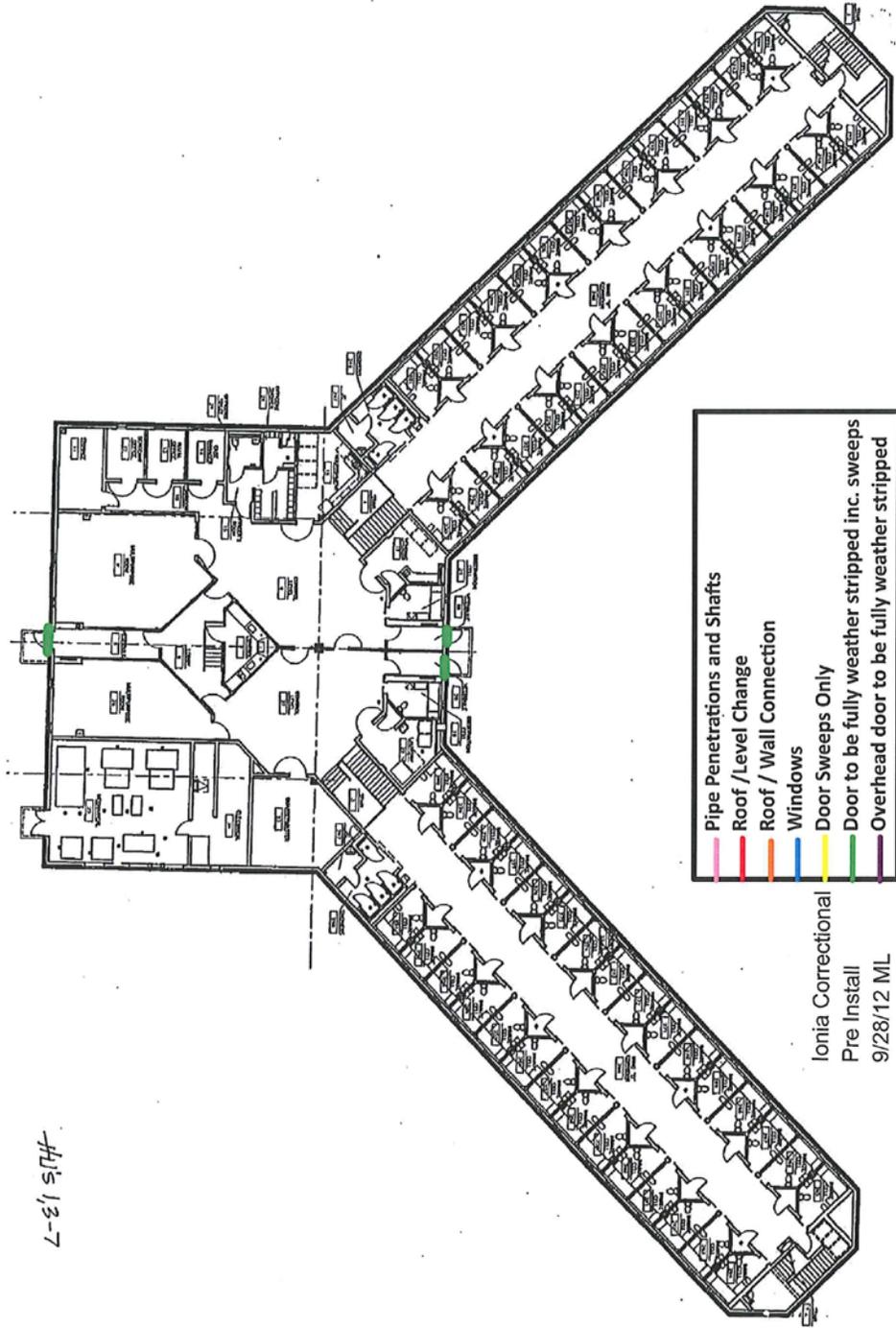
- Pipe Penetrations and Shafts
- Roof / Level Change
- Roof / Wall Connection
- Windows
- Door Sweeps Only
- Door to be fully weather stripped inc. sweeps
- Overhead door to be fully weather stripped

Bld 300 (S.H.M.)

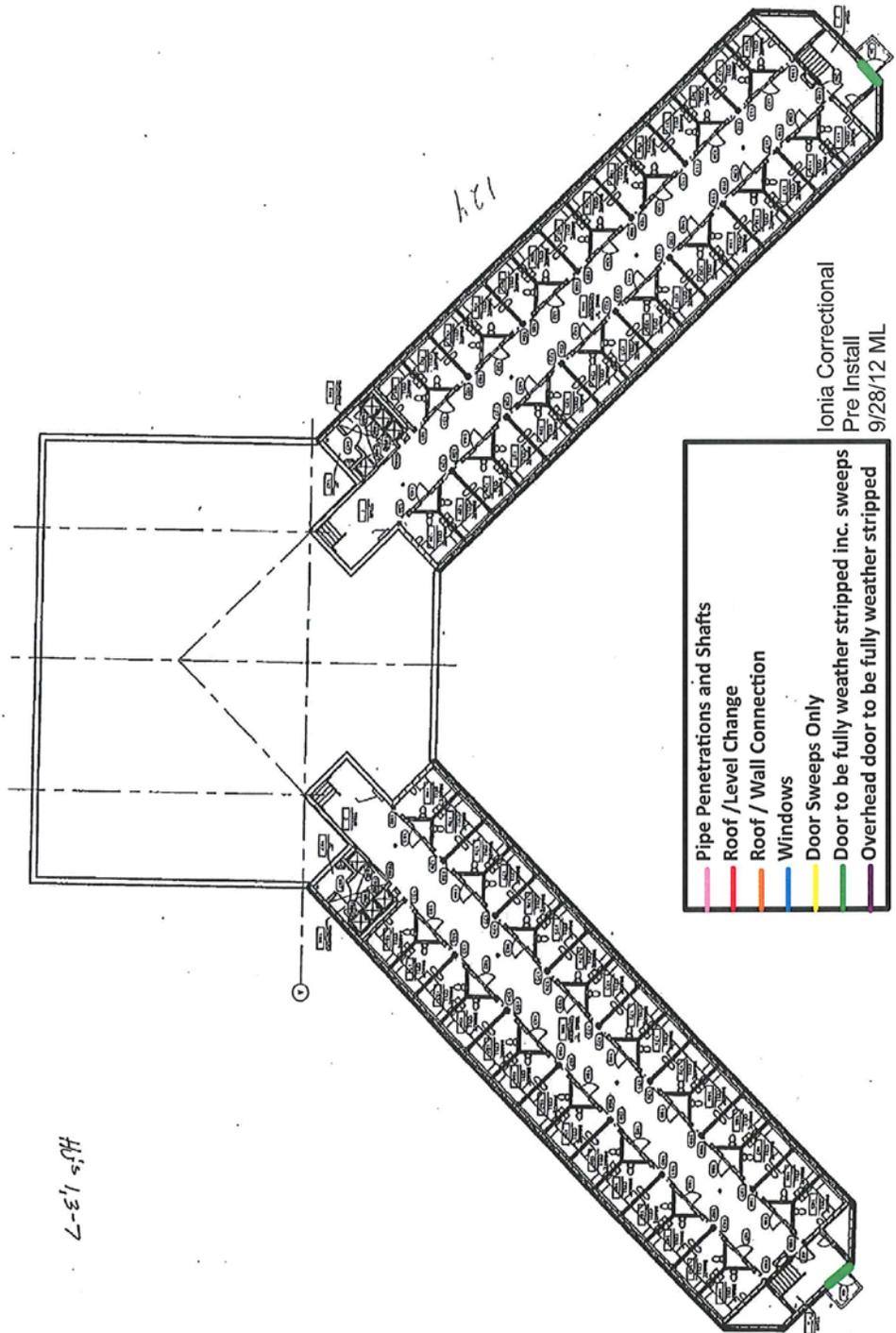
Ionia Correctional
 Pre Install
 9/28/12 MIL

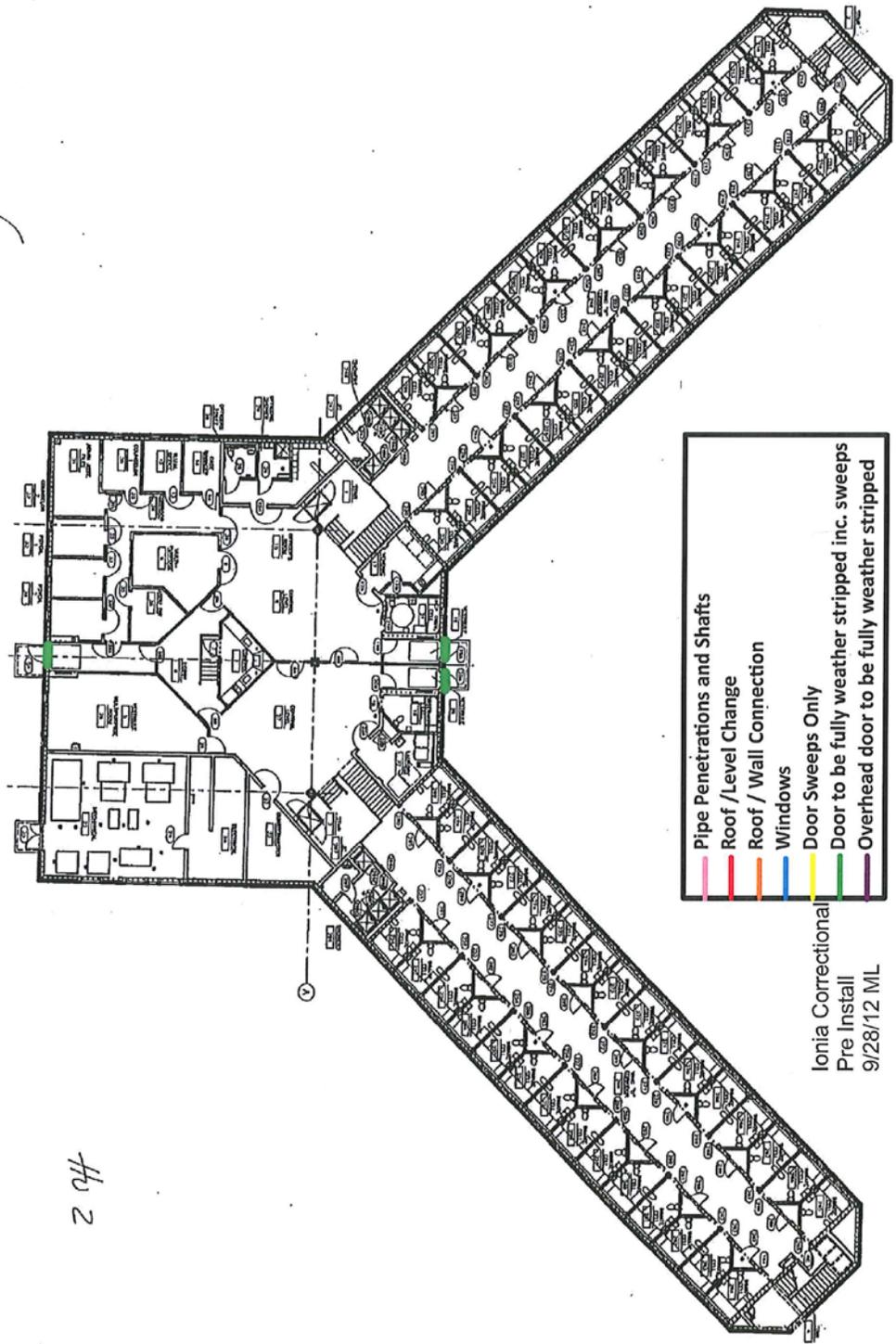
*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.





4-21-14





- Pipe Penetrations and Shafts
- Roof / Level Change
- Roof / Wall Connection
- Windows
- Door Sweeps Only
- Door to be fully weather stripped inc. sweeps
- Overhead door to be fully weather stripped

Ionia Correctional
 Pre Install
 9/28/12 ML

204

ECM #4: Water and Sewer Conservation and Water Cooled Condenser Replacement

RECOMMENDED ACTION

We recommend retrofitting the existing domestic plumbing fixtures with new low-flow, higher efficient plumbing savings and replacing the existing water cooled walk in cooler compressor with an air cooled compressor.

Estimated Water Savings	=22,136 KGAL/yr.
Estimated Gas Savings	=675 MCF/yr.
Estimated Water Cost Savings	= \$178,415/yr.
Estimated Gas Cost Savings	= \$4,126/yr.
Implementation Cost	= \$2,573,768

Implementation costs includes design and engineering, project management, contingency, performance, overhead and profit.

*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

EXISTING CONDITIONS

IBC has approximately 1808 inmates housed within the eight (8) units of the facility. The inmate areas contain eight hundred ninety (890) cells configured with either stainless steel combination fixtures or separate stainless steel lavatory and toilet fixtures. Additionally, there are 89 showers located throughout the inmate areas.

The existing stainless steel combination fixtures and stainless steel lavatory & toilet fixtures have been measured to average 3.5 gallons per flush. The industry average use per fixture approaches 40 flushes per day, therefore, the volume of water used and associated water and sewer costs is substantial. Additionally, the shower usage has been measured to average 2.0 gallons per minute which is much higher than the proposed retrofit units.

Water Cooled Condenser

A water cooled compressor is used to provide refrigeration for the walk in coolers. This type of a system uses water to cool the condenser then discharges down the drain.

A control valve is used to modulate the water based on head pressure or temperature but often these valves become clogged or break down and continuously discharge water down the drain. This is the last water cooled compressor at the Dorm; all of the others have been converted to air cooled.

PROPOSED SYSTEMS

We recommend I-CON systems based on our experience with the equipment and MDOC's recommendation of I-CON. The proposed retrofit measure was designed to address all of the issues and expenses identified. There are two aspects of the proposed retrofit; first, retrofitting the inmate cell areas and stainless steel fixture equipped restrooms with I-CON electronic plumbing control systems and, second, retrofitting the existing china fixtures with new more efficient systems in dorm and administration areas.

The I-CON electronic plumbing control system is being proposed for the cell areas and stainless steel fixture equipped restrooms in the facilities because the I-CON products are the only sources that can offer retrofit systems adapting to all existing plumbing fixtures at the sites.

The I-CON system is the one source that can reduce gallons per flush from 3.5 gallons per flush to 1.6 gallons per flush, without the need to replace the plumbing fixture at a significant added cost. Each time the toilet is flushed, it will provide a prescribed reduction in water, and the corresponding reduction in water and sewer expense will occur.

RECOMMENDATIONS AND SCOPES

Housing Units 1-8 Retrofits

Each housing unit in units 1 through 7, consist of two sides with two floors each, resulting in a total of 4 wings labeled as A, B, C, and D. Each wing contains 30 cells for a total of 120 cells per housing unit. In addition, there are two observation cells located in the center of the housing unit. Each set of two cells has a V-shape plumbing chase located between them that contain the flush valves and lavatory valves for the adjacent cells. The existing plumbing controls are Sloan 3.5 gpf flush valves and pneumatic block lavatory valves. The existing fixtures are stainless steel combination units, mostly Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet. ESG will update them with I-CON VLV-FLV-3711 Flush Valve and I-CON VLV-CMN-2190-0914-002 lavatory controls.

Each inmate's flush valve, Eight Hundred Fifty Four (854), will be retrofitted with an I-CON flush valve. The existing flush valve stop will remain. All existing fixtures will remain. Each inmate's lavatory valve, Eight Hundred Fifty Four (854), will be retrofitted with an I-CON pneumatic block. Each inmate's existing flush valve and lavatory valve buttons will be replaced with an I-CON sensor button.

Housing unit 8 consists of two wings, A and B. A wing constrains 16 cells with stainless steel combination units. B wing contains 20 cells with separate stainless steel toilets and lavatories. Each set of two cells has a V-shape plumbing chase located between them that contain the flush valves and lavatory valves for the cells. The existing plumbing controls are Sloan 3.5 gpf flush valves and pneumatic block lavatory valves. The existing fixtures are stainless steel. Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet. ESG will update with I-CON VLV-FLV-3711 Flush Valves and lavatory I-CON VLV-CMN-2190-0914-002.

Each inmate's flush valve, **Thirty-Six (36)**, will be retrofitted with an I-CON flush valve. The existing flush valve stop will remain. All existing stainless steel combination fixture will remain. Each inmate's lavatory valve, **Thirty-Six (36)**, will be retrofitted with an I-CON pneumatic block. Each inmate's existing flush valve and lavatory valve buttons will be replaced with an I-CON sensor button. In locations where a block wall exists, an I-CON core drill assembly will be utilized.

Electrical Requirements: In each plumbing chase, we will be pulling low-voltage from the emergency circuit or back up power circuit to power the I-CON controllers. We will be installing a Buck Boost transformer to step power down to 24 volts. We will be installing I-CON combination lavatory/toilet controllers.

Inmate Area Retrofit

The inmate restroom areas listed below utilize separate stainless steel toilet and lavatory fixtures.

Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C will be updated with I-CON VLV-FLV-3711 Flush Valve and lavatory retrofit with I-CON VLV-LAV-4812-0914-002.



Each inmate's Sloan flush valve, **Twenty-Four (24)**, will be retrofitted with an I-CON flush valve. The existing flush valve stop will remain. All existing stainless steel fixtures will remain. Each inmate's lavatory valve, **Fifteen (15)**, will be retrofitted with an I-CON pneumatic block. Each inmate's existing push buttons will be replaced with I-CON sensor buttons. In locations where a block wall exists, an I-CON core drill assembly will be utilized.

Electrical Requirements:

Each plumbing chase which has a 110 Volt receptacle will use a 24VAC plug-in transformer. When a receptacle is unavailable, a box mount transformer will be utilized.

Shower Valve Systems Retrofits for Units 1-8

Each **One Hundred Fifteen (115)** inmate shower valve will be replaced with an I-CON VLV-SHW-5775. Each inmate's existing push button (or buttons/depending on the existing conditions) will be replaced with an I-CON SEN-1501 sensor button. Where plumbing chase access and power are not available, we will be utilizing an I-CON CTR-X11-B-01-S-001-WP 1 I/O battery controller.

Each housing unit, 1-7, is made up of 4 wings which have 4 showers each. Housing unit 8 has 3 showers located in the center of the housing unit. The existing shower plumbing controls are a mixture of single button electronic valves and single lever mixing valves. Acorn Head Stainless Steel Inset Shower Panel will be retrofit with I-CON Single Temp Shower Valve.

Each shower valve **One Hundred Fifteen (115)** will be retrofitted with an I-CON VLV-SHW-5775 shower valve. Each existing shower valve button will be replaced with an I-CON SEN-1501 sensor button.

Electrical Requirements:

When power is available, a box mount transformer will be utilized to step down the power to 24 volts. Where plumbing chase access and power are not available, we will be utilizing an I-CON CTR-X11-B-01-S-001-WP 1 I/O battery controller.

Low Flow Retrofit Scope

Low Flow Plumbing Controls

<i>Description</i>	<i>Quantity</i>
Toilet	32
Faucet	63
Urinals	3

Water Closet Retrofits

Each, **Thirty-Two (32)**, existing 3.5 water closets will be replaced with Zurn Floor Mount, Floor Mount ADA, Wall Mount, Tank Type or Tank Type ADA water closets where applicable. Locations are shown on the attached application schedule.

Regarding existing floor mounted toilets, all broken floor flanges will be repaired. In the event a floor flange is beyond repair a "repair flange" will be installed prior to the new retrofit. Wall toilets will receive a new neoprene gasket prior to installation. Flush Valve type water closets will receive a new Zurn Z-6200 piston flush valve. The existing Water Closet flush valve will be removed from the angle stop to the closet spud connection and the new valve installed. Locations and operation of the isolation valves will be shown to the subcontractor by the facility staff. The subcontractor is not responsible for the existing conditions of said isolation valves and may require the assistance of the facility to locate additional "secondary" valves in an effort to shut down the flow of water to perform the retrofit. Tank Type toilets will also receive a new stainless steel braided supply hose. Each new toilet (not including I-CON retrofit) will receive a new toilet seat.

Staff & Inmate Lavatory Aerators

Each, **Fifty-Seven (57)**, staff and, **Five (5)**, inmate lavatory aerators will be replaced with an I-CON .5 GPM vandal resistant aerator made for institutional use that will insure the aerator stays in place and the savings will continue on a long term basis. **One (1)** inmate faucets will be replaced with a Symmons S-60 metering faucet with a .5 GPM vandal resistant aerator.

Urinal Flush Valves

Each, **Three (3)** urinal flush valves will be replaced with a Zurn Z-6201 or Z-6203 piston flush valve. The existing Urinal flush valve will be removed from the angle stop to the urinal fixture spud connection and the new valve and spud installed. Locations and operation of the isolation valves will be shown to the subcontractor by the facility staff. The subcontractor is not responsible for the existing conditions of said isolation valves and may require the assistance of the facility to locate additional "secondary" valves in an effort to shut down the flow of water to perform the retrofit.

Project Totals

The total numbers of Plumbing Controls for the entire facility are as follows:

I-CON STANDALONE PLUMBING CONTROLS

<i>Description</i>	<i>Quantity</i>
I-CON Combination Fixture Retrofits	870
I-CON Separate Flush Valve Retrofits	44
I-CON Separate Lavatory Retrofits	35
I-CON Shower Retrofits	115

SAVINGS CALCULATIONS

Water and Sewer Conservation Retrofit

Savings Summary (Plumbing Fixtures + Water Cooled Condenser Retrofit)

	Kgal	Water \$/Kgal	Sewer \$/Kgal	Total Savings	MCF	\$/MCF	Total Savings
IBC	22,136	\$2.45	\$5.61	\$178,415	675	\$6.110	\$4,126

Inmates	1,888
IBC	1,888
Incoming Water Temperature	60
Mixed water temperature	105

Water and Sewer Savings Calculations

Plumbing Fixture Savings = (Use per day before x gpm before x Number of units x 365) - (Uses per day After x gpm after x number of units x 365)

Shower Savings = (Minutes per usage before x gpm before x inmates x 365) - (Minutes per usage After x gpm after x units x 365)

Facility	Fixture Type	Inmates	GPM Before	GPM After	Gallon Savings	Plumbing Fixtures		Showers		Total Kilo-Gallon (per 1000 gallons) Savings Per Year	
						Fixture Quantity	Uses Per Day Before	Uses Per Day After	Minutes Per Usage Before		Minutes Per Usage After
IBC	I-Con Flush Valves	1888	3.5	1.6	1.9	884	19	20			11,132
	Toilet	1888	3.5	1.28	2.22	32	20	20			519
	Urinal	1888	1.5	1	0.5	13	10	10			24
	Lavatory	1888	2.2	0.5	1.7	57			4	4	4,686
	I-Con Showers	1888	2	2	0	115			10	6	5,513
	Shower	1888	3	2	1						0
	Total										

Gas Savings from Water Usage Reduction

Total MCF Before = (Mixed Water Temp - Incoming Temp) x 1 Btu/lb./F x (GPM before/2) x Usage Before x inmates x 8.34 pounds per gallon x (365 days/year) / (1,000,000 btu/MCF) * 86% efficiency)

Total MCF After = (Mixed Water Temp - Incoming Temp) x 1 Btu/lb./F x (GPM after/2) x Usage after x inmates x 8.34 pounds per gallon x 365 days/yr. / (1,000,000 btu/MCF x 86% efficiency)

Facility	Fixture Type	Inmates/ Staff	GPM Before	GPM After	Mixed Water Temp	Incoming Water Temp	Usage Before	Usage After	Total MCF Usage Per Year Before	Total MCF Usage Per Year After	MCF Yearly Savings
IBC	Dorm Showers	10	2	2	105	60	8	6	13	10	3
	Dorm Lavatories		2.2	0.5	105	60	4	4	0	0	0
	Common Showers	1600	2	2	105	60	8	6	2,039	1,529	510
	Common Lavatories	300	2.2	0.5	105	60	4	4	210	48	162
Total											675

Water Cooled to Air Cooled Walk in Cooler Condensers

The existing compressors for the kitchen freezers is water cooled. City water is used to cool the condensers on the compressors then discharged down the drain. This Energy Conservation Measure proposes to change the water cooled condensers to air cooled.

Facility: Dormitory (associated with Bellamy Creek)

	Walk in Cooler
Existing HP	1
Cycle Time	50%
Hours of operation	8760
GPM when operating	1
1000 Gallons per year used	263
Water and sewer \$/1000 gallons	\$ 8.06
Water and sewer cost	\$ 2,118
Electrical Cost to Operate Air Cooled Cond.	
Existing KW/HP	1
Future KW/HP	1.5
Extra KW	0.5
KWH extra	2,190
\$/KWH	\$ 0.0903
Electric cost to operate air cooled	\$ 197.76
Net Savings	\$ 1,920

SYSTEMS RETROFIT – FLUSH VALVE & LAVATORY

Housing Units 1-7 Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
HU1	A	1	Cells 101 & 102	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 103 & 104	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 105 & 106	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 107 & 108	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 109 & 110	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 111 & 112	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 113 & 114	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 115 & 116	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 117 & 118	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 119 & 120	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 121 & 122	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 123 & 124	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 125 & 126	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 127 & 128	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	A	1	Cells 129 & 130	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 131 & 132	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 133 & 134	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 135 & 136	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 137 & 138	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 139 & 140	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 141 & 142	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002



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*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
					Steel Combination Toilet		
HU1	B	1	Cells 143 & 144	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 145 & 146	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 147 & 148	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 149 & 150	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 151 & 152	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 153 & 154	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 155 & 156	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 157 & 158	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	B	1	Cells 159 & 160	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 201 & 202	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 203 & 204	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 205 & 206	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 207 & 208	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 209 & 210	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 211 & 212	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 213 & 214	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 215 & 216	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 217 & 218	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 219 & 220	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 221 & 222	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 223 & 224	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002



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Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
HU1	C	2	Cells 225 & 226	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 227 & 228	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	C	2	Cells 229 & 230	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	Center	1	Observation Cell - 18	1	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	Center	1	Observation Cell - 21	1	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 231 & 232	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 233 & 234	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 235 & 236	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 237 & 238	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 239 & 240	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 241 & 242	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 243 & 244	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 245 & 246	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 247 & 248	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 249 & 250	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 251 & 252	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 253 & 254	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 255 & 256	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 257 & 258	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU1	D	2	Cells 259 & 260	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002



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Housing Unit 8 Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
HU8	A	1	Cells 1 & 2	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 11 & 12	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 13 & 14	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 15 & 16	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 3 & 4	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 5 & 6	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 7 & 8	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	A	1	Cells 9 & 10	2	Acorn H/C Pneumatic Lavatory Sloan 3.5 GPF Acorn Stainless Steel Combination Toilet	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 17 & 18	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 19 & 20	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 21 & 22	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 23 & 24	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 25 & 26	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 27 & 28	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 29 & 30	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 31 & 32	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 33 & 34	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
HU8	B	1	Cells 35 & 36	2	Wall Mount Wall Outlet Toilet and Wall Mount Lavatory	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002

Inmate Area Retrofits

The inmate restroom areas listed below utilize separate stainless steel toilet and lavatory fixtures.

Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
200	Food Service	1	Inmate Restroom - 28	2	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4812-0914-002
200	Medical	1	Inmate Restroom - 28	1	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4812-0914-002
300	Education	1	Inmate Restroom - 12	2	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4812-0914-002
300	Education	1	Inmate Restroom - 15	2	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4812-0914-002
300	Education	1	Inmate Restroom - 18	2	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4812-0914-002
300	Education	1	Inmate Restroom - 19	2	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4812-0914-002
300	Education	1	Maintenance Restroom	1	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-LAV-4811-0914-002
500	Maintenance	1	Inmate Restroom - 19	1	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
500	Warehouse	1	Inmate Restroom - 18	1	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002
Admin	Visiting	1	Inmate Restroom - 41	1	Acorn Floor Mount Wall Outlet Stainless Steel Toilet & Stainless Steel Lavatory H/C	I-CON VLV-FLV-3711 Flush Valve	I-CON VLV-CMN-2190-0914-002

Bldg	Area	Flr	Room	Qty	Existing Description	Urinal Retrofit
200	Food Service	1	Inmate Restroom - 28	1	Stainless Steel Urinal	I-CON VLV-FLV-3711 Flush Valve
300	Education	1	Inmate Restroom - 12	2	Stainless Steel Urinal	I-CON VLV-FLV-3711 Flush Valve
300	Education	1	Inmate Restroom - 15	2	Stainless Steel Urinal	I-CON VLV-FLV-3711 Flush Valve
300	Education	1	Inmate Restroom - 18	2	Stainless Steel Urinal	I-CON VLV-FLV-3711 Flush Valve
300	Education	1	Inmate Restroom - 19	2	Stainless Steel Urinal	I-CON VLV-FLV-3711 Flush Valve

TEMS RETROFIT – SHOWER VALVE

Housing Units 1-8 Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Shower Retrofit
HU1	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU1	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU1	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU1	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU2	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU2	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU2	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU2	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU3	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU3	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU3	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU3	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU4	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU4	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU4	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU4	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU5	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU5	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU5	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU5	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU6	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU6	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU6	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU6	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU7	A	1	Shower - 146	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU7	B	1	Shower - 196	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU7	C	2	Shower - 246	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU7	D	2	Shower - 296	4	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU8	Center	1	Shower 1	1	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU8	Center	1	Shower 2	1	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve
HU8	Center	1	Shower 3	1	Acorn Head Stainless Steel Inset Shower Panel	I-CON Single Temp Shower Valve

ECM #5: Energy Management System Upgrade/Expansion

Recommended Action

Upgrade and expand the existing Johnson Controls EMS to include: most current software, further training, software upgrades for (2) years, revise sequence of operation with the input and approval from the staff, add equipment, and upgrade/revise graphics.

Estimated KWH Savings	=43,496 KWH/yr.
Estimated Electric Cost Savings	= \$3,928/yr.
Estimated MCF Savings	= 27 MCF/yr.
Estimated Gas Cost Savings	= \$163/yr.
Implementation Cost	= \$118,503

Implementation costs includes design and engineering, project management, contingency, performance, overhead and profit.

Estimated cost based on \$/square feet for software upgrade and reprogramming and at IBC.

*Estimated energy and cost savings are for year one only. All cost and savings are +/- 10%.

Existing Conditions

The existing EMS at IBC is a Johnson Controls Metasys system installed in 1998, with all of the facilities being total digital controls, no pneumatics. The system is operable; the staff is trained and familiar with the control system. Most of the major equipment is on the system but sequences of operation need to be adjusted to accommodate the actual operation of the system.

The Dorm does not have an EMS and is all antiquated electric controls.

Recommendations

At IBC, ESG recommends the upgrade of the existing Johnson direct digital controls for the Facility HVAC equipment; however, the collaborative process will allow the DOC to determine the final product to be used.

Install variable frequency drives with override on dining room air handler and return fan.

At the Dorm ESG recommends the installation of a basic EMS including start/stop, status and monitoring. EMS to be non proprietary, open protocol, Tridium based and capable of being integrated with the existing Johnson Controls system at IBC.

Off-site access via a VPN or any other means will not be permitted.

Other control strategies that will be implemented on fan systems that are suited for these applications are:

Optimized Start/Stop – the air-handling units will be individually controlled to startup for the optimum morning warm-up or cool-down start-time to reach the proper space temperature determined by the outside air temperature.

Space Setback Temperatures – where applicable, space temperatures will be set-up or down to maintain the predetermined space temperature to conserve energy during unoccupied periods.

Benefits of New DDC Controls:

- A. *Energy Efficiency* – The new control system will allow the buildings to take advantage of energy savings strategies.
- B. *Reduced Maintenance Cost* – The maintenance staff will be able to address maintenance issues from a single point. The staff can access trending data; can monitor equipment run times, alarms and schedules. In addition, all maintenance associated with the pneumatic system will be reduced or eliminated.
- C. *Temperature Control and Comfort* – DDC provides superior temperature control and occupant comfort.
- D. *Operating Costs* – A properly operating system will save energy.

Dormitory Correctional Facility

Building Automation System (BAS) Upgrade

Variable Speed Drives

Facility	KWH Savings	KWH \$	kWh Savings
Bellamy Creek	43,496	\$ 0.0903	\$ 3,928

Existing Variable speed drives installed in the 1990's no longer work on the air handling equipment.

This ECM proposes to replace the existing non operable variable frequency drives and in install new VFD's.

All sequences and the installation of the VFD's are based on the installation of an energy management system.

Savings Calculations

Conversion Constant = 0.746
 Affinity factor = 2.1 the actual calculations the number is cubed but in reality this should be less than 3 and preferably between 2 and 2.5
 VSD efficiency = 95% VSD efficiencies can range from 95% to 99% per manufacturers data.

Annual KWH with VSD = HP x Motor Loading x VSD% speed^{Affinity Factor} x C x occupied bin hours / (Motor Efficiency x VSD efficiency)
 Annual KWH without VSD = HP x Motor Loading x Conversion Constant x occupied bin hours / (Motor Efficiency)
 KWH savings = KWH no VSD - KWH with VSD

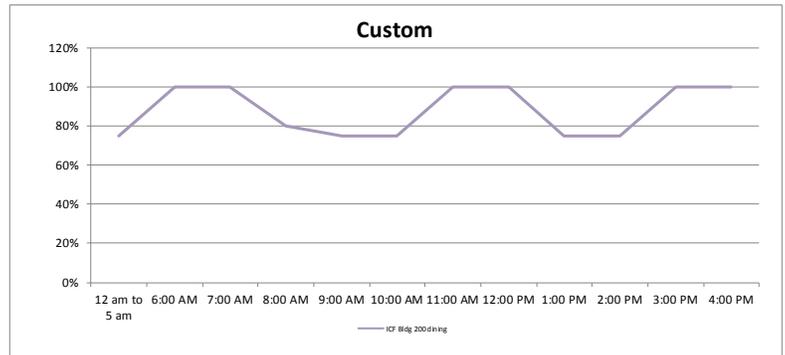
Custom (Time based)

General Sequence: fan speed will be based on time schedule as shown.

Equipment	Building	Area Served	Horsepower (HP)	Motor Energy Efficiency	Max/rated gpm or cfm	Motor loading	Max rpm	Max head or in. WC	Min %	Min cfm or Gpm	Min RPM or speed	Head or pressure at Min. speed	HZ at min speed
IBC Dining SAF	Bellamy Creek	Dining	20	90%	10,019	73%	1800	3	75%	7514.1	1350	2	45
IBC dining RAF	Bellamy Creek	Dining	7.5	90%	10,019	73%	1800	3	75%	7514.1	1350	2	45

	Time	12 am to 5 am	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM to Mid.
IBC Dining SAF	annual hours	1,825	365	365	365	365	365	365	365	365	365	365	365	365	2,555
	% speed	75%	100%	100%	80%	75%	75%	100%	100%	75%	75%	100%	100%	80%	75%
IBC dining RAF	annual hours	1,825	365	365	365	365	365	365	365	365	365	365	365	365	2,555
	% speed	75%	100%	100%	80%	75%	75%	100%	100%	75%	75%	100%	100%	80%	75%

Equipment	Building	Annual KWH with VSD	Annual KWH without VSD	Savings (Kwh)
IBC Dining SAF	Bellamy Creek	74,378	106,011.57	31,634
IBC dining RAF	Bellamy Creek	27,892	39,754.34	11,863



Unoccupied Setback

This ECM calculates the energy savings from changing the space temperature (up in summer and down in the winter) when the spaced is unoccupied. An energy management system will act as a time clock to start, stop and cycle the equipment during the unoccupied period.

Facility	kWh Savings	KWH \$	kWh Savings	natural gas Savings	Natural Gas	Cost Savings
Dormitory	-	\$ 0.0884	\$ -	27	\$ 6.11	\$ 163

U = U values for wall, roof, windows, doors (See below)
 A = Area of walls, roof, windows, doors (See below)

Buildings or areas that will be set back

Equipment	Building	Area	Sq Ft	Wall Area	Wall U	stories	Roof Area	Roof U	Window Area	U	overall U value
Dorm Chapel	Dormitory	Chapel	900	1,018	0.125	2	450	0.05	102	1.61	314
Dorm Dining	Dormitory	Dining	1,800	1,176	0.125	3	600	0.05	118	2.61	484
Dorm Gym	Dormitory	Gym	2,400	1,176	0.125	4	600	0.05	118	3.61	601

HEATING -

Calculates the savings from setting back a building or area when unoccupied.

Temp below which building will require some heating

Existing occupied hours/week

Proposed occupied hours/week

Warm up hours

Heating season hours

% of area that will set back

Existing setback temperature

Proposed setback temperature

% heating eff

Savings (MCF)

Below this temperature the building or area will require some heating. No unoccupied heating will take place above this temperature

Existing time the building or area is occupied

Future weekly occupied time

Amount of time that system will require to warm up from setback. Generally about 25% of the setback time

Number of hours in the heating season based on the temperature below which heating will be required.

Estimated percent of the square feet that can be set back.

Existing setback temperature

Proposed setback temperature. Generally about 60 F to enable the building to be at temperature when occupied.

% heating efficiency of the heating system

= overall U value x (existing setback - proposed setback) x (existing weekly hours - future weekly hours - warm up) x
 (heating season hours/168 hours/week) x % of area that will be setback /(% heating efficiency x 1,000,000 btu/mcf)

Building	Equipment	Temp below which building will require some heating	Existing occupied hours/week	Proposed occupied hours/week	Warm up hours	Heating season hours	% of area that will set back	Existing setback temperature	Proposed setback temperature	% heating eff	Savings (MCF)	
Dormitory	Chapel	Dorm Chapel	45	168	84	21	4,059	90%	72	60	86%	6.0
Dormitory	Dining	Dorm Dining	45	168	84	21	4,059	90%	72	60	86%	9.2
Dormitory	Gym	Dorm Gym	45	168	84	21	4,059	90%	72	60	86%	11.5

Dorm Points List

	Building	Equip.	Description	Serves	HP SAF/RA For pump	CFM or gpm/head	% OA	Clg Tons (ea)	Qty	Start/Stop/Status			Steam System		
										Start/Stop	Status	Space Temp.	FTR valve and act. *1	Steam Pressure	HW Blr Bacnet/LON
1	Old Dorm	Boilers							2					1	2
2	Old Dorm	Heating		Dining					2			2	2		
3	Old Dorm	Heating		Chapel					2			2	2		
4	Old Dorm	Heating		Gym					2			2	2		
5	Outside Air temperature								1			1			
6	(10) points to be added									10	10	10			
										10	10	17	6	1	2
										Total Points		46			
										Total Estimated Cost		\$ 24,600			

Notes:

*1 provide 1" steam valve and actuator. Remove existing and install new.