

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

February, 2013



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Section 1: Existing Conditions

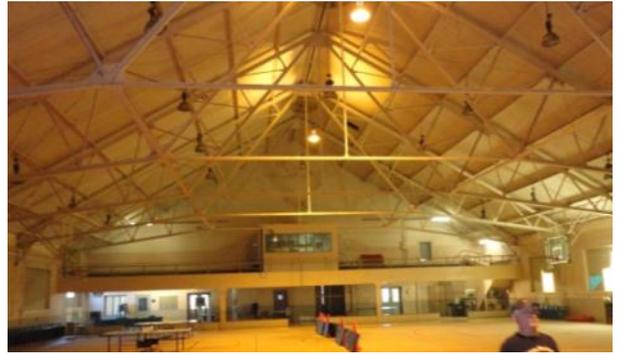
Michigan Reformatory (RMI)

The following applies to all of the buildings unless otherwise noted.

1. The buildings date from the early 1900's with numerous renovations over the years.
2. The facility was closed for several years. During this time, much of the asbestos was removed and several renovations were done.
3. The buildings are almost exclusively steam heating with much of it being original or renovated several times over the past 100 years.
4. Most of the buildings have single pane glass that is in poor condition.
5. Almost all of the mechanical equipment is original and in poor condition.
6. The Central Boiler Plant provides steam for heating, domestic water, clothes dryers and kitchen steam kettles. The existing underground piping is in poor condition with numerous leaks and requires regular maintenance. See **Central Boiler Plant ECM #1-Boiler Decentralization**.
7. Softened water is provided to the campus from the central water softener located in the Central Boiler Plant.
8. As in the other correctional facilities in Ionia the city water is in poor condition and destroy fitting, especially on the softener and domestic hot water heat exchanger.
9. The steam, condensate, domestic hot water supply/return and cold water piping is provided to each building through a tunnel system that connects the buildings.
10. The system, for the most part, is standalone electric controls with no pneumatic controls or central energy management system and several standalone time clocks.



The above pictures are several of the thermostats and time clocks located in the buildings. There is no energy management system to control temperatures or time schedules from a single location. As part of this ECM an energy management system will be added to major mechanical equipment for setback, status and monitoring
See **ECM #5: Energy Management System**



The lights in the gym above the kitchen will be changed to fluorescent similar to the other buildings.
See
ECM #2: Lighting Upgrade

ECM's investigated but not included due to long payback:

Many of the doors are in poor condition with doors and frames extremely rusted. This door should be replaced. It cannot be sealed with weather stripping. Replacement of door though providing energy savings does not pay for itself with 15 years.



Almost all of the windows are original single pane glass in steel frames and are in poor condition. The cost to replace the windows with double pane insulated windows with tempered glass and security bars does not pay for itself within 15 years.



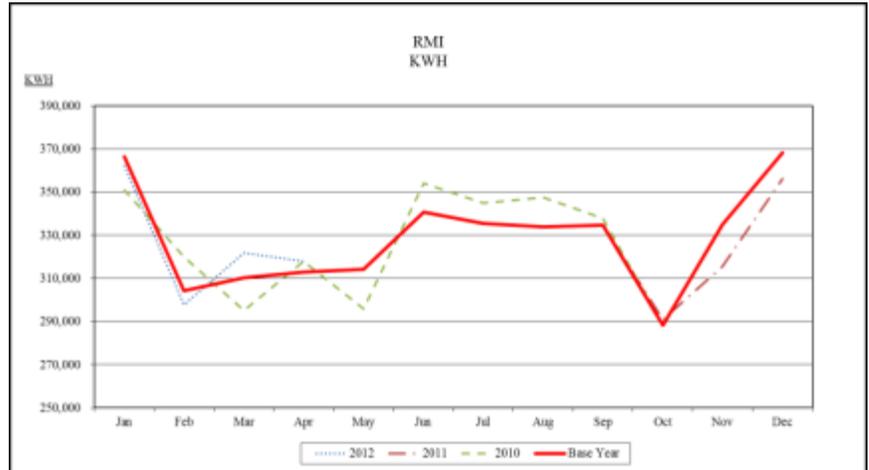
Section 2: Base Year Energy Usage

ELECTRICAL ENERGY CONSUMPTION

Power is provided by Consumers Energy with an average blended rate of \$.0884/KWH.

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

Reformatory (estimated)	
Usage Date	Total Elect Usage (Kwh)
Base Year	
Oct-10	288,217
Nov-10	335,008
Dec-10	368,139
Jan-11	366,409
Feb-11	304,412
Mar-11	310,282
Apr-11	312,916
May-11	314,335
Jun-11	340,693
Jul-11	335,564
Aug-11	334,049
Sep-11	334,698
	3,944,722



The above graph compares the base year the actual usage for 2010, 2011 and part of 2012.

NATURAL GAS UTILITY SUMMARY

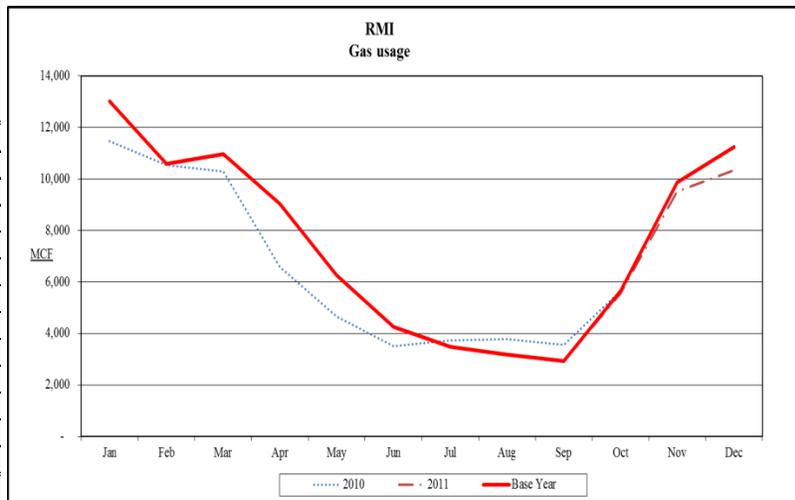
The DOC through the State of Michigan purchases gas through a broker or marketer and the gas is delivered to the facility by Consumers Energy. The price of natural gas due to recent drilling methods, a mild winter and economic recession is at an all-time low. We feel this will not continue and the cost of gas over the lifetime of the equipment will eventually rise. A report from BP projects the gas costs to rise to by 61% over the next 5 years which would bring the delivered gas cost to the Ionia Complex to \$6.05.

The usage is based on a DOE-2 energy program. The following chart compares the estimated usage at RMI to the other facilities IBC is shown for reference only.

Facility	Square Feet	Estimated MCF	inmates	Usage/inmate	MCF/sq.ft.	% of Total Usage	Comments
ICF	295,000	53,251	706	75.43	0.181	21.40%	
MTU	318,861	89,582	1,295	69.17	0.281	36.00%	
Dormitory	62,652	15,428	240	64.28	0.246	6.20%	
RMI	449,141	90,577	1,316	68.83	0.202	36.40%	Based on DOE-2 Energy Program
Total	1,125,654	248,838	3,557	69.96	0.221		
IBC	400,807	56,376	1,648	34.21	0.141		Shown for reference only

The following table is a combination of metered gas usage at RMI and the estimated steam usage provided from the Central Boiler Plant shown in the above chart.

RMI Total Base Year Gas Usage Summary	
Usage Date	Total Estimated Gas Usage (MCF)
Base Year	
Oct-10	5,707
Nov-10	9,956
Dec-10	11,359
Jan-11	13,108
Feb-11	10,646
Mar-11	11,049
Apr-11	9,062
May-11	6,296
Jun-11	4,303
Jul-11	3,503
Aug-11	3,207
Sep-11	2,958
Annual Totals =	91,154



Note: Steam is provided from the central plant for heating, domestic hot water, kitchen steam kettles and clothes dryers. Steam is provided from the same central boiler plant to (3) other facilities.

WATER & SEWER UTILITY SUMMARY

RMI 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 actual billed usage for water includes RMI and the central boiler plant. The following shows the breakdown for the estimated water usage for just the RMI. We have assumed the sewer usage is the same as the water for RMI.

	Total billed usage	RMI usage at 66%
Dec-10	23,318	15,497
Mar-11	23,482	15,606
Jun-11	26,296	17,476
Sep-11	25,910	17,220
	99,006	65,800

Reformatory Inmates	Estimated Annual KGAL/Inmate	Total Estimated usage	Actual Metered usage	% RMI
1316	50	65,800	99,006	66%

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.

RMI Utility Base Line Summary					
Base Year Utility	Base Year Utility Usage	Base Year Utility Cost (\$/yr.)	Base Year Unit Cost	Unit Cost Basis	
Electricity	3,944,722 KWH	\$ 348,698	\$0.0884 \$/KWH	Actual blended \$/KWH based on base year costs	
Natural Gas	91,154 MCF	\$556,953	\$ 6.11 \$/MCF	Estimated average natural gas cost over the term of the contract	
Water and Sewer	65,800 KGAL	\$530,348	\$8.06 \$/KGA L	Actual cost of water and sewer that took effect in June 2012	
Total		\$1,435,999			

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 CVL 3	\$ 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) Cust



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

Electric Base Year									
Facility Name	Address	Account No.	Meter No.(s)	Billing Period	On Peak Bill Demand Cap	On Peak kWh	Off Peak kWh	Max Demand	Total \$ Due
RMI	1342 W Main St	110000080075	5678048	10/19/10	666	89,719	279,790	799	\$ 32,247
				11/19/10	701	107,661	321,837	799	\$ 35,913
				12/22/10	712	109,182	362,791	799	\$ 37,558
				01/24/11	712	111,539	358,216	799	\$ 38,282
				02/25/11	710	94,889	295,383	799	\$ 33,284
				03/22/11	684	96,890	300,908	799	\$ 33,647
				04/20/11	662	98,195	302,979	799	\$ 33,589
				05/20/11	695	101,004	301,989	799	\$ 34,351
				06/21/11	735	101,098	335,688	799	\$ 42,358
				07/21/11	758	106,268	323,942	772	\$ 42,482
				08/19/11	751	107,618	320,650	768	\$ 42,134
				09/20/11	699	96,390	332,710	768	\$ 41,203
RMI	1001 Wall St	100018839751	63492344	10/27/10	207				\$ 43
				11/30/10	39				\$ 38
				01/03/11	162				\$ 39
				01/29/11	124				\$ 34
				03/01/11	804				\$ 115
				03/29/11	134				\$ 36
				04/27/11	139				\$ 36
				05/26/11	108				\$ 34
				06/28/11	111				\$ 35
				07/27/11	269				\$ 56
08/25/11	23				\$ 20				
09/27/11	27				\$ 20				

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
RMI	1342 West Main #Big St	3638000000	2	\$ 4.70	-	\$ -	3	\$ 7.05	-	\$ -	5	\$ 11.75
RMI	1342 West Main #Sml St	3638020000	461	\$ 1,294.64	399	\$ 1,120.53	416	\$ 1,168.27	415	\$ 1,165.46	1,691	\$ 4,748.89
RMI	1342 West Main #B#2	3638030000	19,775	\$ 46,471.25	20,010	\$ 47,023.50	22,205	\$ 52,181.75	21,925	\$ 51,523.75	83,915	\$ 197,200.25
RMI	1342 West Main #Sm#2	3638040000	3,080	\$ 7,238.00	3,073	\$ 7,221.55	3,181	\$ 7,475.35	3,146	\$ 7,393.10	12,480	\$ 29,328.00
RMI	1342 West Main #bar screenScrm	3638070000		\$ -		\$ -	377	\$ 885.95	420	\$ 987.00	797	\$ 1,872.95
RMI	1342 West Main #Carpenter bldg	3638080000		\$ -		\$ -	113	\$ 265.55	2	\$ 4.70	115	\$ 270.25
RMI	1342 West Main #Tran	3638090000		\$ -		\$ -	1	\$ 2.35	2	\$ 4.70	3	\$ 7.05

Utility Rate	Energy Efficiency	Transportation	Gas Charges					Total per unit
			Customer Charge	Gas Distribution	Energy Optimization	Interim Increase	Gas Cost Recovery	
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
RMI	801 Wall Street #A	GS-2 Com	29002733	Jan-11	77.8	\$705.98	\$9.074293
				Feb-11	45.7	\$406.03	\$8.884683
				Mar-11	70.6	\$611.25	\$8.657932
				Apr-11	30.8	\$277.40	\$9.006494
				May-11	30.0	\$271.05	\$9.035000
				Jun-11	31.0	\$280.05	\$9.033871
				Jul-11	23.6	\$215.62	\$9.136441
				Aug-11	18.5	\$172.49	\$9.323784
				Sep-11	19.6	\$179.47	\$9.156633
				Oct-11	27.9	\$247.47	\$8.869892
				Nov-11	79.4	\$670.90	\$8.449622
				Dec-11	92.7	\$778.94	\$8.402805
RMI		LT-1	6707159	Jan-11	105.3	\$566.90	\$5.383666
				Feb-11	82.1	\$444.22	\$5.410719
				Mar-11	89.9	\$465.43	\$5.177197
				Apr-11	83.5	\$441.26	\$5.284551
				May-11	88.4	\$479.06	\$5.419231
				Jun-11	92.7	\$510.53	\$5.507335
				Jul-11	90.6	\$502.30	\$5.544150
				Aug-11	103.8	\$554.49	\$5.341908
				Sep-11	101.9	\$534.56	\$5.245927
				Oct-11	101.5	\$531.35	\$5.234975
				Nov-11	109.4	\$548.19	\$5.010878
				Dec-11	93.6	\$451.44	\$4.823077
MR Training House	1390 Main St	LT-1	23183060	Jan-11	31.4	\$168.97	\$5.381210
				Feb-11	25.3	\$136.57	\$5.398024
				Mar-11	20.7	\$107.23	\$5.180193
				Apr-11	12.3	\$64.85	\$5.272358
				May-11	4.9	\$26.66	\$5.440816
				Jun-11			
				Jul-11			
				Aug-11			
				Sep-11			
				Oct-11	4.2	\$22.09	\$5.259524
				Nov-11	12.0	\$59.86	\$4.988333
				Dec-11	16.9	\$81.54	\$4.824852

Section 3: Energy Conservation Measures

Based on conversations with DTMB and MDOC, the following are the recommended ECM's for RMI. 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 System Upgrade

ECM #2: Lighting Upgrade

ECM #3: Building Envelope

ECM #4: Water and Sewer Conservation

ECM #5: Energy Management System

Construction Cost Estimate

Client MDOC and DTMB
Project RMI
Location Ionia, MI

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

	Qty.	Unit	Unit Cost	Total
LIGHTING UPGRADE				
(1) Relamps	1	LS	\$41,271	\$41,271
(2) Relamp/Reballast	1	LS	\$154,767	\$154,767
(3) Reflector Retrofits	1	LS	\$82,542	\$82,542
(4) New fixtures	1	LS	\$72,224	\$72,224
(5) LED	1	LS	\$154,767	\$154,767
(6) Occupancy sensors	1	LS	\$10,318	\$10,318
TOTAL LIGHTING UPGRADE			\$515,889	
BUILDING ENVELOPE				
(1) Weatherstripping, roof/wall sealing	1	LS	\$5,250	\$5,250
(2)				\$0
TOTAL BUILDING ENVELOPE			\$5,250	
WATER/SEWER CONSERVATION				
(1) Inmate Flush Valves	1	LS	\$1,130,052	\$1,130,052
(2) Inmate Lavatory Valves	1	LS	\$594,764	\$594,764
(3) Inmate Shower Valves	1	LS	\$218,080	\$218,080
(4) Staff Valves	1	LS	\$39,651	\$39,651
TOTAL WATER/SEWER CONSERVATION			\$1,982,548	
ENERGY MANAGEMENT SYS. UPGRADE/EXPANSION/VARIABLE SPEED DRIVES				
(1) Control Points	1	LS	\$171,650	\$171,650
(2) Program., eng., software, computer, graphics, training, portable computer (% of total)	1	10.0%	\$17,165	\$17,165
(3)				\$0
TOTAL ENERGY MANAGEMENT SYS. UPGRADE/EXPANSION/VARIABLE SPEED DRIVES			\$188,815	

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 System Upgrade

ECM#1 is optional and based on 15 year financing.

RECOMMENDED ACTION

ESG recommends replacement of (2) of the existing boilers with (2) new boilers with reduced capacity to provide the heating needs for only the reformatory and surrounding buildings.

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

EXISTING CONDITIONS

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

PROPOSED SYSTEMS

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

Summary: Install (2) new steam boilers to provide the heating requirement for reformatory.

ECM #2: Lighting Upgrade

RECOMMENDED ACTION

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

Estimated Energy Savings	=654,163 KWH/yr.
Estimated Cost savings	=\$57,828 Dollars/yr.
Implementation Cost	= \$746,483

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

RMI 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 3,873 fixtures create an upgraded the fixture count of 3,827, 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.

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

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



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

\$ Savings = KWH savings Occupancy sensor x \$/KWH

SCOPES

Complex Wide

Existing 2x4 (3) and (4) T8 and T12 lamp troffers will be retrofitted with specular reflectors, F028 T8 lamps and high efficiency electronic ballasts.

Existing 2x4 (3) and (4) lamp T8 lamp troffers, with annual hours of operation at or below 1999, will be relamped with F028 T8 lamps.

Existing 2x4 (2) T8 and T12 lamp troffers will be relamped and rebalasted with F028 T8 lamps and high efficiency electronic ballasts.

Existing 2x4 (2) T8 lamp troffers, with annual hours of operation at or below 1999, will be relamped with F028 T8 lamps.

Existing 1x4 (2) T8 and T12 lamp troffers will be retrofitted with specular reflectors, F028 T8 lamps and high efficiency electronic ballasts.

Existing 1x4 (2) T8 lamp troffers, with annual hours of operation at or below 1999, will be relamped with F028 T8 lamps.

Existing 2x2 (2) and (4) T8 and T12 u-bend lamp troffers will be retrofitted with specular reflectors, F017 T8 lamps and high efficiency electronic ballasts.

Existing 8' (2) T8 lamp vapor tight fixtures will be replaced with new vapor tight fixtures with specular reflectors, F028 T8 lamps and high efficiency electronic ballasts.

Existing 8' (2) T8 HO and T12 HO lamp vapor tight fixtures will be replaced with new vapor tight fixtures with specular reflectors, F032 T8 lamps and high efficiency electronic ballasts.

Existing 8' (4) T8 lamp wrap fixtures will be replaced with new wrap fixtures with specular reflectors, F028 T8 lamps and high efficiency electronic ballasts.

Existing 8' (1) and (2) T8 and T12 lamp industrial and strip fixtures will be retrofitted with specular reflectors, F028 T8 lamps and high efficiency electronic ballasts.

Existing 8' (1) and (2) T8 HO and T12 HO lamp industrial fixtures will be retrofitted with specular reflectors, F028 T8 lamps and high efficiency electronic ballasts.

Existing 3' (2) T12 lamp fixtures will be relamped and rebalasted with F025 T8 lamps and high efficiency electronic ballasts.

Existing 4' (1), (2), (3) and (4) T12 lamp fixtures will be relamped and rebalasted with F028 T8 lamps and high efficiency electronic ballasts.

Existing 4' (1), (2), (3) and (4) T8 lamp fixtures, with annual hours of operation at or above 3000, will be relamped and rebalasted with F028 T8 lamps and high efficiency electronic ballasts.

Existing 4' (1), (2), (3) and (4) T8 lamp fixtures, with annual hours of operation at or below 2999, will be relamped with F028 T8 lamps.

Existing 250 watt high pressure sodium and 400 watt metal halide high bay fixtures will be replaced with new high bay fixtures with specular reflectors, F032 T8 lamps and high efficiency electronic ballasts.

Certain existing 400 watt metal halide high bay fixtures will be replaced with new high bay fixtures with specular reflectors, F032 T8 lamps, high efficiency electronic ballasts and integral occupancy sensors.

Existing incandescent lamp fixtures will be relamped with compact fluorescent lamps.

Existing incandescent flood lamp fixtures will be relamped with LED flood lamps.

Existing compact fluorescent lamp fixtures are energy efficient, nothing will be done.

Existing incandescent and compact fluorescent exit signs will be replaced with new LED exit signs.

Exterior (Attached to Building) – Existing 175 watt metal halide wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers.

Exterior (Attached to Building) – Existing 70, 175 and 250 watt high pressure sodium wallpack fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers.

Exterior (Attached to Building) – Existing 400 watt high pressure sodium and metal halide flood fixtures will be replaced with new LED flood fixtures with high efficiency electronic drivers.

Exterior (Attached to Building) – Existing 400 watt mercury vapor cobra head fixtures will be replaced with new LED fixtures with high efficiency electronic ballasts.

Exterior (Attached to Building) – Existing 500 watt incandescent fixtures will be replaced with new LED wallpack fixtures with high efficiency electronic drivers.

Exterior (Attached to Building) – Existing 1000 watt high pressure sodium flood fixtures are energy efficient, nothing will be done.

SITE LIGHTING OPTION

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

Existing 1000 watt high pressure sodium flood fixtures are energy efficient, nothing will be done.

Existing 175 watt metal halide wall pack fixtures will be replaced with new LED wall pack fixtures with high efficiency electronic drivers.

OCCUPANCY SENSOR OPTION

There is good opportunity to install occupancy sensors (in non-inmate areas) throughout the prison complex's 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:

Conferences
Lounges
Restrooms

Offices
Records Storages

Gyms
Medication Storages

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF01	ROTUNDA	8,760	8	112	8	64	WRAP: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	WRAP: NEW MEDIUM 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF01	ROTUNDA HLWY	8,760	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF01	REST	3,000	1	112	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF01	CUSTODY OFFICE	2,000	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF01	FILE RM	1,800	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF01	OFFICE	2,000	1	89	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, PARABOLIC LOUVER, 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
MF01	OFFICE	2,000	1	59	1	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

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, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	
MF01	REST	3,000	1	15	1	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF01	OFFICE	2,000	1	59	1	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF01	G BLOCK ENTRY	8,760	1	188	1	84	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 40 WATT T12 LAMPS, AND (2) STANDARD MAGNETIC BALLASTS	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF01	CONNECTOR	8,760	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF01	RECEPTION	8,760	1	46	1	20	STRIP: SURFACE MOUNTED WITH NARROW 3' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 3' 30 WATT T12 LAMP, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 3' 25 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF01	RECEPTION	8,760	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF01	ELEC	500	2	18	2	18	18 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
MF01	CONNECTOR	8,760	2	72	2	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF01	ENTRY	8,760	2	59	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
MF01	CUST	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF01	PROPERTY RM	1,500	6	59	6	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF01	PROPERTY RM	1,500	4	59	4	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF01	CONTROL RM	8,760	4	89	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, PARABOLIC LOUVER, 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
MF01	CONTROL RM	8,760	2	89	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, PARABOLIC LOUVER, 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
MF01	SERVER	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF01	CONTROL RM	8,760	4	89	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, PARABOLIC LOUVER, 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
MF01	STAIRWELL	8,760	1	112	1	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
MF01	STAIRWELL	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF01	ROTUNDA	8,760	5	112	5	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF01	ROTUNDA	8,760	1	144	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	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
MF01	BARBER SHOP	2,600	6	112	6	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF01	STORAGE	500	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF01	STORAGE	500	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF01	CONNECTOR	8,760	1	59	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
MF01	HALLWAY	8,760	1	59	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
MF01	EXTERIOR	4,380	5	458	5	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
MF01	EXTERIOR	4,380	1	1,100	1	1,100	FLOOD: WITH (1) 1000 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
MF01	EXTERIOR	4,380	1	1,100	1	1,100	FLOOD: WITH (1) 1000 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
MF01	EXTERIOR	4,380	5	458	5	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
MF02	INTERIOR	5,000	7	138	7	44	100 WATT HIGH PRESSURE SODIUM FIXTURE	UNIVERSAL RETROFIT KIT WITH (1) 40 INDUCTION LAMP, AND (1) UNIVERSAL VOLTAGE ELECTRONIC BALLAST
MF02	EXTERIOR	4,380	1	458	1	143	400 WATT METAL HALIDE FIXTURE	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF03	SNOW SHOVEL STORAGE	1,000	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
								POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	SNOW SHOVEL STORAGE	500	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF03	STORAGE	500	1	100	1	18	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF03	OFFICE	2,000	17	109	17	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	MAINT OFFICE	2,000	1	23	1	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF03	STAIRS	8,760	1	100	1	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF03	STAIRS	8,760	1	59	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
MF03	SNOW REMOVAL GARAGE	1,500	4	72	4	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	SNOW REMOVAL GARAGE	1,500	4	59	4	50	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 WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF03	SNOW REMOVAL GARAGE	1,500	2	23	2	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF03	WOOD SHOP	2,850	1	109	1	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	WOOD SHOP	2,850	4	100	4	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF03	WOOD SHOP	2,850	2	72	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	WOOD SHOP	2,850	1	207	1	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	STORAGE	1,000	4	160	4	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) STANDARD MAGNETIC BALLASTS	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	RESTS	1,500	3	23	3	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF03	MOWER GARAGE	2,850	23	59	23	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF03	MOWER GARAGE	2,850	1	80	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	OFFICE	2,500	1	144	1	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	EMS GARAGE	1,500	4	145	4	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 110 WATT T12HO LAMP, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	STAIR	1,000	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	BASEMENT	1,000	1	75	1	18	75 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF03	BASEMENT	1,000	1	23	1	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF03	EMS HALL	1,000	1	207	1	95	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF03	REST	1,500	1	23	1	23	23 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
MF03	EXTERIOR	4,380	3	100	3	23	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) R40 23 WATT COMPACT FLUORESCENT LAMP
MF03	EXTERIOR	4,380	1	295	1	70	FLOOD: 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
MF03	BARN EXTERIOR	4,380	3	205	3	65	175 WATT MERCURY VAPOR FIXTURE	BARN LIGHT: NEW REPLACEMENT FIXTURE WITH (1) 65 WATT COMPACT FLUORESCENT LAMP, AND (1) UNIVERSAL VOLTAGE ELECTRONIC BALLAST
MF03	BARN EXTERIOR	4,380	3	100	3	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF04	KITCHEN	1,500	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF04	RESOURCE	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF04	TRAINING ROOM	2,000	4	112	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF04	TRAINING ROOM	2,000	4	59	4	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF04	ENTRY	1,500	1	100	1	18	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF04	ENTRY	1,500	1	23	1	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF04	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF04	CLOSET	500	1	100	1	18	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF04	HALL	1,500	1	23	1	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF04	CLOSET	500	1	23	1	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF04	OFFICE	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF04	CLOSET	500	1	100	1	18	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF04	RESTROOM	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF04	STAIRS	1,000	1	23	1	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF04	HALL	1,500	4	112	4	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF04	HALL	1,500	2	112	2	98	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF04	STORAGES	500	4	112	4	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF04	HALL	1,500	1	100	1	18	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF04	STORAGE	500	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF04	TRAINING	2,000	8	59	8	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF04	TRAINING	2,000	5	112	5	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF04	GARAGE	2,850	1	100	1	18	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF04	PORCHES	500	2	23	2	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF04	EXTERIOR	4,380	1	205	1	70	WALLPACK: WITH (1) 175 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 70 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
MF05	EXTERIOR	4,380	2	295	2	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
MF05	EXTERIOR	4,380	2	95	2	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
MF05	EXTERIOR	4,380	1	295	1	70	FLOOD: 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
MF05	EXTERIOR	4,380	2	23	2	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF05	RECEIVING	2,850	3	458	3	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS
MF05	RECEIVING	2,850	2	59	2	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF05	OFFICE	2,850	16	72	4	95	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	TROFFER: UNIVERSAL 1'X16' RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF05	RESTROOM	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF05	STORAGE	2,500	2	458	2	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH 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 BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR
MF05	OFFICE	2,500	2	59	2	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF05	WAREHOUSE	2,850	40	458	40	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR
MF05	CAGE OFFICE	2,500	2	207	2	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF05	WAREHOUSE N/L	8,760	1	59	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
MF05	DRY STORAGE	2,500	6	458	6	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR
MF05	BREAK/RESTROOM	1,500	3	59	3	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF05	COOLER 3	2,850	3	195	3	107	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 110 WATT T12HO LAMPS AND (1) ENERGY SAVING MAGNETIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF05	UPPER MECHANICAL	1,000	4	207	4	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF05	UPPER MECHANICAL	1,000	1	109	1	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF05	UPPER MECHANICAL	1,000	3	59	3	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF06	OFFICE	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF06	OPEN SWITCHGEAR	8,760	5	458	5	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF06	OPEN SWITCHGEAR	8,760	1	59	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
MF06	PUMP ROOM	8,760	21	59	21	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
MF06	PUMP ROOM	8,760	7	112	7	84	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (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
MF06	BASEMENT	2,000	38	59	38	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF06	BASEMENT	8,760	10	112	10	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
MF06	BASEMENT	8,760	2	207	2	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF06	BASEMENT	8,760	7	109	7	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT 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
MF06	RESTROOM	8,760	2	72	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF06	EMPLOYEE REST	8,760	1	138	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF06	2ND FLOOR PUMP ROOM	8,760	10	112	10	84	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (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
MF06	2ND FLOOR PUMP ROOM	8,760	16	59	16	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
MF06	2ND FLOOR PUMP ROOM	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF06	2ND FLOOR PUMP ROOM	8,760	2	458	2	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR
MF06	EXTERIOR	4,380	8	295	8	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

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF06	EXTERIOR	4,380	1	95	1	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
MF06	EXTERIOR	4,380	4	500	4	70	500 WATT INCANDESCENT LAMP	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 70 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF07	GARAGE	2,850	9	458	9	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR
MF07	GARAGE	2,850	3	178	3	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	GARAGE	2,850	9	207	9	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	OFFICE	2,500	3	112	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF07	OFFICE	2,500	1	160	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) STANDARD MAGNETIC BALLASTS	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
MF07	OFFICE	2,500	4	112	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF07	RESTROOM	1,500	1	59	1	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF07	BREAKROOM	2,850	6	112	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF07	GARAGE	2,850	1	178	1	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	GARAGE	2,850	1	207	1	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	CRIB	2,500	1	138	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	CRIB	2,500	1	112	1	98	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (4) LINEAR	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS

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	
MF07	HALL	2,500	1	207	1	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	OFFICE	2,500	4	112	4	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF07	TOOL CRIB	2,500	4	112	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF07	TOOL CRIB	2,500	2	72	2	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 U-BEND LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF07	TOOL CRIB	2,500	2	207	2	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	TOOL CRIB	2,500	9	72	9	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF07	RESTROOM	1,500	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	RESTROOM	1,500	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF07	WELDING GARAGE	2,850	4	207	4	95	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 95 WATT T12HO LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	WELDING GARAGE	2,850	3	458	3	215	HIGHBAY: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS, AND (1) INTEGRAL OCCUPANCY SENSOR
MF07	WELDING GARAGE	2,850	1	100	1	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF07	OFFICE/TOLS	2,500	8	112	8	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF07	STEEL STORAGE	2,500	2	72	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	FILES	1,000	4	72	4	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 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) ENERGY SAVING MAGNETIC BALLAST	ELECTRONIC BALLAST
MF07	FILES	1,000	1	72	1	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF07	EXTERIOR	4,380	2	188	1	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
MF07	EXTERIOR	4,380	3	458	2	143	FLOOD: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF08	HALLWAY	6,550	3	59	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
MF08	HALLWAY	8,760	4	59	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
MF08	COPY RM	2,000	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF08	CLOSET	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF08	OFFICE	2,000	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH 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
MF08	OFFICE	2,000	1	112	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF08	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	INMATE REST	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF08	INMATE REST	1,500	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF08	REST	1,500	1	59	1	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF08	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	STORAGE	500	1	138	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT 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
MF08	OFFICE	2,000	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	OFFICE	2,000	2	138	2	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF08	CONFERENCE	2,000	6	112	6	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	STORAGE	500	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF08	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	MECH	1,000	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF08	STAIRWELL	8,760	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF08	STAIRWELL	8,760	2	40	2	13	40 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 13 WATT COMPACT FLUORESCENT LAMP

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF08	LOCKER RM	6,550	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF08	OFFICE	2,000	4	112	4	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	REST	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF08	HALLWAY	6,550	1	60	1	18	60 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF08	OFFICE	2,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	OFFICE	2,000	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF08	REST	1,500	2	18	2	18	18 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
MF08	OFFICE	2,000	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF08	OFFICE	2,000	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF08	OFFICE	2,000	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF08	OFFICE	2,000	2	109	2	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF08	OFFICE	2,000	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF08	EXITS	8,760	1	15	1	2	EXIT SIGN WITH (2) TWIN TUBE 7 WATT COMPACT FLUORESCENT LAMPS, (1) MAGNETIC BALLAST	EXIT SIGN: NEW REPLACEMENT FIXTURE WITH (1) 2 WATT LED LIGHT ENGINE, AND EMERGENCY BATTERY BACKUP
MF09	HALLWAY	8,760	12	72	12	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF09	HALLWAY	6,550	8	72	8	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF09	STORAGE	500	8	72	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF09	CELLS	2,000	38	59	38	50	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF09	CELLS	2,000	37	72	37	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF09	SHOWERS	6,550	4	18	4	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF09	CUST	500	2	72	2	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF09	HOLDING	6,550	2	15	2	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF09	HOLDING	6,550	4	72	4	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF09	MISC	6,550	1	120	1	23	R40 120 WATT INCANDESCENT LAMP	RELAMP WITH (1) R40 23 WATT COMPACT FLUORESCENT LAMP
MF09	EXTERIOR	4,380	2	188	2	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
MF10	CONNECTOR	3,100	1	178	1	95	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 86 WATT T8HO LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (4) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	OFFICE	2,000	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF10	STORAGE	500	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF10	ELEC	8,760	1	59	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
MF10	HALLWAY	3,100	7	59	7	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
MF10	HALLWAY	8,760	7	59	7	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
MF10	HALLWAY	3,100	1	75	1	27	75 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF10	INMATE REST	3,100	2	59	1	84	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	TANDEM RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	INMATE REST	3,100	1	59	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
MF10	STORAGE	500	2	72	2	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	STORAGE	500	2	72	2	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	COMPUTER LAB	3,100	3	59	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
MF10	COMPUTER LAB	8,760	1	59	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
MF10	COMPUTER LAB	3,100	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING	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
							MAGNETIC BALLAST	
MF10	COMPUTER LAB	3,100	4	72	4	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	COMPUTER LAB	8,760	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	CLASS	3,100	10	89	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
MF10	CLASS	8,760	4	89	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
MF10	CLASS	3,100	6	89	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
MF10	CLASS	8,760	2	89	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
MF10	CLASS	3,100	6	89	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
MF10	CLASS	8,760	2	89	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
MF10	CLASS	3,100	10	89	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
MF10	CLASS	8,760	4	89	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
MF10	STORAGE	500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF10	INMATE REST	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF10	STORAGE	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF10	MECH	1,000	1	18	1	18	18 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
MF10	NMATE REST	1,500	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF10	OFFICE	2,000	4	59	4	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF10	CLASS	3,100	6	59	6	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
MF10	REST	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF10	OFFICE	2,000	4	59	4	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF10	CLASS	3,100	6	59	6	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
MF10	STORAGE	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF10VE ND	VENDMISERS	8,760	1	427	1	427	COLD VENDING MACHINE	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
MF11	HALLWAY	3,100	2	59	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
MF11	HALLWAY	3,100	16	59	16	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
MF11	HALLWAY	8,760	4	59	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
MF11	FILE RM	8,760	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF11	CLASS	3,100	6	89	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
MF11	CLASS	3,100	10	89	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
MF11	CLASS	8,760	2	89	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
MF11	CLASS	3,100	6	89	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
MF11	CLASS	3,100	6	89	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
MF11	CONFERENCE	2,000	6	89	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
MF11	CUST	4,000	2	59	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
MF11	OPEN OFFICE	2,500	12	89	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
MF11	OPEN OFFICE	2,500	3	89	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
MF11	CLASS	3,100	8	89	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

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
MF11	CLASS	3,100	1	89	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
MF11	OFFICE	2,000	3	89	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
MF11	SERVER	500	3	89	3	73	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (3) LINEAR 4' 28 WATT T8 LAMPS
MF11	MECH	1,000	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF11	REST	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF11	FILE RM	2,000	10	89	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
MF11	FILE RM	8,760	2	89	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
MF11	OFFICE	2,000	11	89	11	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
MF11	OFFICE	8,760	1	89	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
MF11	REST	1,500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF11	REST	8,760	1	59	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
MF11	CUST	500	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF11	LOCKER RM	3,100	4	89	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
MF11	ACCESS	1,000	1	15	1	15	15 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
MF11	STORAGE	500	3	89	3	73	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (3) LINEAR 4' 28 WATT T8 LAMPS
MF11	STORAGE	500	1	89	1	73	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (3) LINEAR 4' 28 WATT T8 LAMPS
MF11	STAIRWELL	8,760	3	59	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
MF11	EXTERIOR	4,380	2	188	2	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
MF12	HALLWAY	2,800	3	164	3	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (3) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF12	LAUNDRY	2,800	30	89	30	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
MF12	LAUNDRY	8,760	7	89	7	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
MF12	OFFICE	2,000	5	89	5	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
MF12	REST	1,500	1	15	1	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF12	REST	1,500	1	15	1	15	15 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF12	STORAGE	500	4	109	4	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF12	HALLWAY	2,800	7	109	7	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF12	HALLWAY	8,760	2	109	2	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF12	PROPERTY RM	2,800	1	109	1	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF12	PROPERTY RM	8,760	1	109	1	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF12	PROPERTY RM	2,800	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF13	DORMS	8,760	21	59	21	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
MF13	MECH	1,000	1	59	1	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF13	CUST	500	2	59	2	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF13	TASK	1,500	16	74	16	40	STRIP: SURFACE MOUNTED WITH NARROW 3' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 3' 30 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 3' 25 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF13	OFFICE	2,000	1	89	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
MF13	INMATE REST	1,500	1	61	1	29	TROFFER: RECESS MOUNTED WITH 2'X2' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 2' 17 WATT T8 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
MF13	CHASE	2,800	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF13	RESTS	2,800	8	59	8	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
MF13	COMMON AREA	2,800	10	59	10	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF13	STAIRWELL	8,760	3	59	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
MF13	EXTERIOR	4,380	1	205	1	70	WALLPACK: WITH (1) 175 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 70 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF13	EXTERIOR	4,380	1	458	1	143	FLOOD: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF13	EXTERIOR	4,380	1	458	1	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
MF14	ELEC	8,760	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF14	HALLWAY	8,760	1	112	1	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
MF14	STORAGE	500	4	59	4	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	DENTIST	3,000	4	59	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
MF14	DENTIST	3,000	1	59	1	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
MF14	OFFICE	2,000	3	115	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	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
MF14	MEDICAL RECORDS	3,000	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF14	MEDICAL RECORDS	3,000	1	59	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
MF14	MEDICAL RECORDS	3,000	2	59	2	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
MF14	MEDICAL RECORDS	3,000	2	60	2	18	60 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF14	OFFICE	2,000	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF14	HALLWAY	4,680	7	59	7	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
MF14	HALLWAY	8,760	1	59	1	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
MF14	HALLWAY	4,680	1	112	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF14	GUARD	7,000	1	59	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
MF14	OFFICE	2,000	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	OFFICE	2,000	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
							BALLAST	
MF14	OFFICE	2,000	9	59	9	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	OFFICE	2,000	3	59	3	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	OFFICE	2,000	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	OFFICE	2,000	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	INMATE REST	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF14	LOCKED	3,000	1	72	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF14	MEDICATION RM	4,680	3	59	3	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
MF14	MEDICATION RM	8,760	1	59	1	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL	RELAMP REBALLAST WITH (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
							REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF14	LAB	3,000	3	144	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	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
MF14	INMATE REST	1,500	1	60	1	18	60 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF14	LAB	3,000	4	144	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	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
MF14	STORAGE	500	4	75	4	12	PAR 30 75 WATT INCANDESCENT LAMP	RELAMP WITH (1) 12 WATT R30 LED FLOOD LAMP
MF14	X RAY RM	3,000	2	59	2	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
MF14	X RAY RM	3,000	7	75	7	12	PAR 30 75 WATT INCANDESCENT LAMP	RELAMP WITH (1) 12 WATT R30 LED FLOOD LAMP
MF14	EXITS	8,760	2	15	2	2	EXIT SIGN WITH (2) TWIN TUBE 7 WATT COMPACT FLUORESCENT LAMPS, (1) MAGNETIC BALLAST	EXIT SIGN: NEW REPLACEMENT FIXTURE WITH (1) 2 WATT LED LIGHT ENGINE, AND EMERGENCY BATTERY BACKUP
MF14	OFFICE	2,000	4	75	4	12	PAR 30 75 WATT INCANDESCENT LAMP	RELAMP WITH (1) 12 WATT R30 LED FLOOD LAMP
MF14	ELEC	500	1	18	1	18	18 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
MF14	SERVER	500	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF14	HALLWAY	4,680	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF14	HALLWAY	8,760	5	109	5	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF14	HALLWAY	8,760	1	59	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
MF15	GYM	3,000	20	109	9	142	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC 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
MF15	GYM	8,760	3	109	1	142	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC 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
MF15	GYM	3,000	1	59	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
MF15	GYM	3,000	1	58	1	48	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 59 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	STRIP: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH WHITE METAL BELLY PAN, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	CELL CORRIDORS	6,550	60	72	60	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	CELL CORRIDORS	8,760	50	72	50	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	CELL CORRIDORS	6,550	50	59	50	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
MF16	CELL CORRIDORS	8,760	60	59	60	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
MF16	OFFICES	4,000	20	72	20	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	OFFICES	4,000	10	72	10	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF16	STORAGES	500	5	18	5	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF16	SHOWERS	6,550	20	72	20	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	QUIET CELLS	2,000	20	59	20	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF16	STAIRWELLS	8,760	5	72	5	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	STAIRWELLS	8,760	5	59	5	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
MF16	CELLS (250)	2,000	250	72	250	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF16	CELLS (250)	2,000	250	59	250	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF17	PHONE	6,550	5	59	5	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
MF17	STORAGE	500	5	18	5	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF17	SHOWERS	6,550	15	72	15	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF17	SHOWERS	6,550	15	59	15	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
MF17	STAIRWELLS	8,760	6	72	6	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF17	STAIRWELLS	8,760	6	59	6	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
MF17	CELL CORRIDOR	6,550	50	72	50	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF17	CELL CORRIDOR	8,760	50	72	50	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF17	CELL CORRIDOR	6,550	50	59	50	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
MF17	CELL CORRIDOR	8,760	50	59	50	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
MF17	STAIRWELL	8,760	5	72	5	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF17	STAIRWELL	8,760	5	59	5	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
MF17	CELLS (240)	2,000	240	59	240	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF17	CELLS (240)	2,000	240	72	240	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF17	ELECS (2)	500	8	72	8	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF17	ELECS (2)	500	8	59	8	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF18	TV RM	4,680	30	59	30	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
MF18	REST	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF18	MECH	1,000	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	MECH	1,000	1	100	1	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF18	MECH	1,000	1	115	1	63	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (3) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	RELAMP REBALLAST WITH (3) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	REST	1,500	1	72	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORAGE	500	5	83	5	48	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 60 WATT T12 LAMP, AND (1) STANDARD MAGNETIC BALLAST	STRIP: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH WHITE METAL BELLY PAN, (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
MF18	STORAGE	500	1	83	1	48	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 60 WATT T12 LAMP, AND (1) STANDARD MAGNETIC BALLAST	STRIP: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH WHITE METAL BELLY PAN, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORAGE	8,760	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORE RM	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORE RM	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORE RM	8,760	16	109	16	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORE RM	8,760	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORE RM	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR	INDUSTRIAL: UNIVERSAL NARROW 8' BODY 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
							8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	REST	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF18	STORAGE	500	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STORAGE	500	1	59	1	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF18	STORAGE	500	1	112	1	98	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF18	HALLWAY	4,680	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF18	HALLWAY	8,760	2	59	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
MF18	HALLWAY	8,760	1	59	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
MF18	STAIRWELL	8,760	3	18	3	18	18 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
MF18	STORAGE	500	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	HALLWAY	4,680	6	112	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF18	HALLWAY	8,760	1	112	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF18	WORK RM	3,100	4	109	4	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF18	WORK RM	3,100	3	109	3	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF18	WORK RM	3,100	6	109	6	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF18	WORK RM	3,100	5	109	5	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'X8' 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
MF18	WORK RM	3,100	6	109	6	48	TROFFER: RECESS MOUNTED WITH 2'X8' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	TROFFER: UNIVERSAL 2'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
MF18	WORK RM	3,100	1	112	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF18	LIBRARY	3,100	47	112	47	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF18	LIBRARY	8,760	3	112	3	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF18	STAIRWELL	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF18	STAIRWELL	8,760	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF18	EXTERIOR	4,380	1	188	1	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
MF18	EXTERIOR	4,380	2	455	2	143	COBRAHEAD: WITH (1) 400 WATT MERCURY VAPOR LAMP AND (1) MAGNETIC BALLAST	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF19	OFFICE	2,000	2	59	2	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF19	OFFICE	2,000	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF19	HALLWAY	2,800	4	18	4	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	CHAPEL	1,250	11	18	11	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	CHAPEL	1,250	42	32	42	32	32 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	HALLWAY	2,800	6	18	6	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	STORAGE	500	2	59	2	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF19	ORGAN	2,800	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF19	KITCHENETTE	2,800	1	18	1	18	18 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
MF19	LIBRARY	2,800	7	72	7	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF19	CUST	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	MECH	1,000	1	100	1	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF19	REST	1,500	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	REST	1,500	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	LOCKER	2,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	EXTERIOR	4,380	3	18	3	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF19	EXITS	8,760	1	40	1	2	EXIT SIGN WITH (2) TUBULAR 20 WATT INCANDESCENT LAMPS	EXIT SIGN: NEW REPLACEMENT FIXTURE WITH (1) 2 WATT LED LIGHT ENGINE, AND EMERGENCY BATTERY BACKUP
MF20	PAINT SHOP	8,760	19	109	19	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF20	TASK	8,760	13	72	13	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF20	STORAGE	1,500	3	72	3	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF20	STORAGE	1,500	2	59	2	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF20	STORAGE	1,500	2	80	2	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF20	STORAGE	1,500	1	80	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF20	EXTERIOR	4,380	2	1,100	2	1,100	FLOOD: WITH (1) 1000 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
MF21	GYM	2,800	30	295	14	215	LOWBAY: WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS
MF21	GYM	8,760	3	295	2	215	LOWBAY: WITH (1) 250 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	HIGH BAY: NEW REPLACEMENT FIXTURE WITH SPECULAR REFLECTOR, (6) LINEAR 4' 32 WATT T8 LAMPS, (2) UNIVERSAL VOLTAGE PROGRAM START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLASTS
MF21	REC	2,800	14	59	14	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1)	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

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	
MF21	REC	8,760	6	59	6	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
MF21	STAIRWELL	8,760	5	72	5	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STORAGE	500	1	144	1	64	WRAP: SURFACE MOUNTED WITH NARROW 8' BODY, ICE TRAY LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	WRAP: NEW MEDIUM 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STAIRWELL	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STAIRWELL	8,760	1	43	1	22	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 4' 34 WATT T12 LAMP, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STAIRWELL	8,760	1	31	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

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF21	STORAGE	500	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF21	OFFICE	2,000	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF21	LAUNDRY	2,000	3	72	3	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	MECH	1,000	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF21	STAIRWELL	8,760	2	109	2	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STAIRWELL	8,760	1	43	1	22	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 4' 34 WATT T12 LAMP, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	MEZZ	2,000	8	59	8	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF21	MEZZ	8,760	3	72	3	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF21	MEZZ	2,000	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF21	REST	1,500	1	72	1	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	CHASE	8,760	1	59	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
MF21	MECH	1,000	2	59	2	50	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF21	MECH	1,000	2	72	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	MECH	1,000	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF21	MECH	1,000	1	150	1	27	150 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF21	MECH	1,000	2	59	2	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF21	STAIRWELL	4,000	4	72	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STAIRWELL	4,000	5	72	5	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	1,000	18	109	18	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	8,760	5	109	5	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	1,000	11	58	11	48	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 59 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	STRIP: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH WHITE METAL BELLY PAN, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	8,760	3	58	3	48	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 59 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	STRIP: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH WHITE METAL BELLY PAN, (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
MF21	STAIRWELL	8,760	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF21	BASEMENT	1,000	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	1,000	1	58	1	48	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 8' 59 WATT T8 LAMP, AND (1) ELECTRONIC BALLAST	STRIP: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH WHITE METAL BELLY PAN, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	1,000	3	109	3	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	1,000	2	109	2	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	CLOSET	500	1	150	1	27	150 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF21	BASEMENT	1,000	6	109	6	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT 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
MF21	STORAGE	500	3	109	3	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	STORAGE	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	REST	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF21	ELEC	500	2	109	2	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	SERVER	8,760	1	109	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	ELEC	8,760	1	72	1	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF21	BASEMENT	1,000	3	109	3	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH 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
MF22	MECH	8,760	1	109	1	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	KITCHEN HALLWAY	8,760	7	72	7	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	KITCHEN HALLWAY	8,760	1	59	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
MF22	KITCHEN HALLWAY	8,760	1	59	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
MF22	KITCHEN HALLWAY	8,760	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	STORAGE	2,000	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF22	MOP RM	2,000	1	59	1	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF22	SINK RM	8,760	4	195	4	107	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 110 WATT T12HO LAMPS AND (1) ENERGY SAVING MAGNETIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	OFFICE	8,760	8	112	8	84	WRAP: SURFACE MOUNTED WITH NARROW 8' 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
MF22	HALLWAY	8,760	3	59	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
MF22	FOOD STORAGE	8,760	12	59	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
MF22	FOOD STORAGE	8,760	1	80	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	COOLER	8,760	7	59	7	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
MF22	COOLER	8,760	4	178	4	107	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	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 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
MF22	COOLER	8,760	2	195	2	107	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 110 WATT T12HO LAMPS AND (1) ENERGY SAVING MAGNETIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	COOLER	8,760	2	195	2	107	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 110 WATT T12HO LAMPS AND (1) ENERGY SAVING MAGNETIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	FOOD PREP	8,760	12	195	12	107	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 110 WATT T12HO LAMPS AND (1) ENERGY SAVING MAGNETIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	FOOD PREP	8,760	3	72	3	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	BREAD RM	6,550	2	109	2	64	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT 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
MF22	ENTRY	6,550	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF22	DISH SINK	6,550	10	72	10	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	KITCHEN	6,550	13	195	13	107	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 110 WATT T12HO LAMPS AND (1) ENERGY SAVING MAGNETIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	KITCHEN	6,550	4	72	4	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	HOOD	6,550	14	18	14	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF22	KITCHEN	6,550	2	72	2	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF22	OFFICE	2,000	4	72	4	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF22	OFFICE	2,000	4	72	4	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR	TROFFER: UNIVERSAL 1'X4' RETROFIT KIT WITH SPECULAR REFLECTOR, (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL

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' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	VOLTAGE INSTANT START NORMAL POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	KITCHEN	6,550	8	109	8	64	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 8' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	VAPOR TIGHT: NEW NARROW 8' BODY REPLACEMENT FIXTURE WITH ACRYLIC LENS, SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	KITCHEN	6,550	1	72	1	42	VAPOR TIGHT: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	FOOD STORAGE	2,000	8	59	8	50	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 WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF22	REST	1,500	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	REST	1,500	1	100	1	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF22	COOLER	6,550	4	59	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
MF22	CAFETERIA	6,550	32	112	32	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC	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
							BALLAST	
MF22	FOOD STORAGE	6,550	2	112	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
MF22	FOOD STORAGE	6,550	4	72	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	DISH WASHER	6,550	3	72	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	UTENSIL STORAGE	5,000	4	72	4	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	CUST	500	1	144	1	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	CUST	500	1	59	1	50	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 WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF22	LOCKER RM	6,550	4	59	4	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
MF22	MECH	1,000	1	112	1	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF22	HALLWAY	6,550	4	138	4	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF22	EXTERIOR	4,380	1	205	1	70	WALLPACK: WITH (1) 175 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 70 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF22	EXTERIOR	4,380	6	458	6	143	FLOOD: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF22	EXTERIOR	4,380	2	1,100	2	1,100	FLOOD: WITH (1) 1000 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
MF22	EXTERIOR	4,380	1	100	1	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	HALLWAY	7,000	5	109	5	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	HALLWAY	7,000	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	WAITING RM	7,000	6	144	6	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR	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
							4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	WAITING RM	7,000	4	100	4	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	WAITING RM	7,000	3	18	3	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	OFFICE	2,000	3	112	3	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF23	PHONE RM	2,000	2	112	2	98	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF23	COURT RM	2,800	3	72	3	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	2,000	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	2,000	4	59	4	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	OFFICE	2,000	6	59	6	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS,	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

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	
MF23	STORAGE	500	1	112	1	98	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS
MF23	TASK	2,000	1	80	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	1,500	8	72	8	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	1,500	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	1,500	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	WEAPONS STORAGE	8,760	4	59	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
MF23	VAULT	1,000	1	18	1	18	18 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
MF23	ARCHIVES	2,000	4	138	4	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	CONNECTOR	8,760	2	59	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
MF23	STORAGE	500	4	100	4	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	STORAGE	500	3	72	3	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STORAGE	500	2	100	2	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	STORAGE	500	2	100	2	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	STORAGE	500	1	138	1	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STAIRWELL	8,760	7	72	7	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF23	HALLWAY	8,760	3	72	3	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	PROPOERT Y RM	1,500	2	72	2	42	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	LOCKSMITH	2,000	6	80	6	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	ARSENAL	1,500	3	138	3	64	STRIP: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 8' 60 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STAIRWELL	8,760	3	59	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
MF23	STAIRWELL	8,760	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	REST	2,800	4	100	4	27	100 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	HALLWAY	7,000	4	112	4	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF23	SECURITY	7,000	2	72	2	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	SECURITY	7,000	1	59	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
MF23	RECEPTION	7,000	1	188	1	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (3) LINEAR 8' 60 WATT T12 LAMP, AND (1) ENERGY SAVING MAGNETIC BALLAST	INDUSTRIAL: UNIVERSAL NARROW 8' BODY RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 4' 28 WATT T8 LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	WAITING	7,000	8	59	8	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
MF23	WAITING	7,000	10	23	10	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	HALLWAY	2,800	1	112	1	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF23	RESTS	2,800	2	59	2	50	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 WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	RESTS	2,800	2	109	2	64	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 8' BODY, NO LENS, WHITE METAL REFLECTOR, (2) LINEAR	INDUSTRIAL: UNIVERSAL NARROW 8' BODY 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
							8' 59 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	LAMPS, AND (1) UNIVERSAL VOLTAGE INSTANT START HIGH POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STORAGE	500	2	59	2	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	STORAGE	500	1	31	1	28	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 WITH (1) LINEAR 4' 28 WATT T8 LAMP
MF23	STORAGE	500	4	18	4	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	STAIRWELL	8,760	3	59	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
MF23	STAIRWELL	8,760	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	LOUNGE	2,800	16	59	16	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	CONFERENCE	2,000	6	144	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	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
MF23	STORAGE	500	1	18	1	18	18 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
MF23	HALLWAY	8,760	1	72	1	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STORAGE	500	2	72	2	42	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	2,000	4	144	4	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	2,000	6	160	6	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) STANDARD MAGNETIC BALLASTS	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
MF23	REST	1,500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	STORAGE	500	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	OFFICE	2,000	10	72	10	42	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OFFICE	2,000	2	188	2	84	INDUSTRIAL: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 40 WATT T12 LAMPS, AND (2) STANDARD MAGNETIC BALLASTS	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
MF23	HALLWAY	2,800	8	59	8	50	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	HALLWAY	8,760	3	59	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
MF23	OFFICE	2,000	3	72	3	25	TROFFER: RECESS MOUNTED WITH 1'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC 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
MF23	STORAGE	500	1	75	1	18	75 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF23	REST	280	1	80	1	42	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) STANDARD MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	REST	2,800	1	18	1	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	REST	2,800	2	43	2	22	STRIP: SURFACE MOUNTED WITH NARROW 4' BODY, NO LENS, WHITE METAL BELLY PAN, (1) LINEAR 4' 34 WATT T12 LAMP, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (1) LINEAR 4' 28 WATT T8 LAMP AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STORAGE	500	2	112	2	98	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (4) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF23	REST	1,500	2	23	2	23	23 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	COMPUTER LAB	2,800	3	144	3	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	COMPUTER LAB	2,800	1	144	1	84	WRAP: SURFACE MOUNTED WITH WIDE 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) LINEAR 4' 34 WATT T12 LAMPS, AND (2) ENERGY SAVING MAGNETIC BALLASTS	RELAMP REBALLAST WITH (4) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	OPEN OFFICE	2,800	5	112	5	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF23	OFFICE	2,000	2	112	2	48	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (4) 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
MF23	STORAGE	500	1	72	1	42	WRAP: SURFACE MOUNTED WITH NARROW 4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 34 WATT T12 LAMPS, AND (1) ENERGY SAVING MAGNETIC BALLAST	RELAMP REBALLAST WITH (2) LINEAR 4' 28 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START LOW POWER HIGH EFFICIENCY ELECTRONIC BALLAST
MF23	STORAGE	500	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	STORAGE	500	1	59	1	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS

Area Information			Existing		Proposed		Description	
Bldg.	Description	Hours of Operation	Qty. Fixt.	Watts per Fixture	Qty. Fixt.	Watts per Fixture	Existing Fixture	Proposed Fixture
MF23	STORAGE	500	2	59	2	50	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 WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	STORAGE	500	2	18	2	18	18 WATT COMPACT FLUORESCENT LAMP	LEAVE ALONE
MF23	CUST	500	1	60	1	18	60 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 18 WATT COMPACT FLUORESCENT LAMP
MF23	OPEN OFFICE	2,800	14	59	14	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	OFFICE	2,000	3	59	3	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	OFFICE	2,000	2	59	2	50	TROFFER: RECESS MOUNTED WITH 2'X4' BODY, ACRYLIC LENS, WHITE METAL REFLECTOR, (2) LINEAR 4' 32 WATT T8 LAMPS, AND (1) ELECTRONIC BALLAST	RELAMP WITH (2) LINEAR 4' 28 WATT T8 LAMPS
MF23	HALLWAY	2,800	1	150	1	27	150 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	HALLWAY	8,760	1	150	1	27	150 WATT INCANDESCENT LAMP	RELAMP WITH (1) SPIRAL 27 WATT COMPACT FLUORESCENT LAMP
MF23	REST	2,800	4	40	4	14	G40 40 WATT INCANDESCENT LAMP	RELAMP WITH (1) G40 14 WATT COMPACT FLUORESCENT LAMP
MF23	OFFICE	2,000	12	59	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)	TROFFER: UNIVERSAL 2'X2' RETROFIT KIT WITH SPECULAR REFLECTOR, (2) LINEAR 2' 17 WATT T8 LAMPS AND (1) UNIVERSAL VOLTAGE INSTANT START NORMAL



Proprietary and Confidential

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Date: February 5, 2013

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

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
MF23	EXTERIOR	4,380	1	458	1	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
MF23VEND	VENDMISERS	8,760	2	427	2	427	COLD VENDING MACHINE	LEAVE ALONE
MF24	SITE LIGHTING	4,380	54	1,100	54	1,100	FLOOD: WITH (1) 1000 WATT HIGH PRESSURE SODIUM LAMP AND (1) MAGNETIC BALLAST	LEAVE ALONE
MF24	SITE LIGHTING	4,380	51	458	51	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
MF24	SITE LIGHTING	4,380	5	188	5	35	POST TOP: POLE MOUNTED 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
MF24	SITE LIGHTING	4,380	1	205	1	70	WALLPACK: WITH (1) 175 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	WALLPACK: NEW REPLACEMENT FIXTURE WITH (1) 70 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
MF24	SITE LIGHTING	4,380	11	458	11	143	FLOOD: WITH (1) 400 WATT METAL HALIDE LAMP AND (1) MAGNETIC BALLAST	FLOOD: NEW REPLACEMENT FIXTURE WITH (1) 143 WATT LED LIGHT ENGINE AND (1) ELECTRONIC DRIVER
			3,873		3,827			

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	= 109 MCF/yr.
Estimated Gas Cost Savings	= \$664/yr.
Implementation Cost	= \$7,597

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 define 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 occupants’ 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 air tight 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
Reformatory	109	\$ 6.11	\$ 664

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

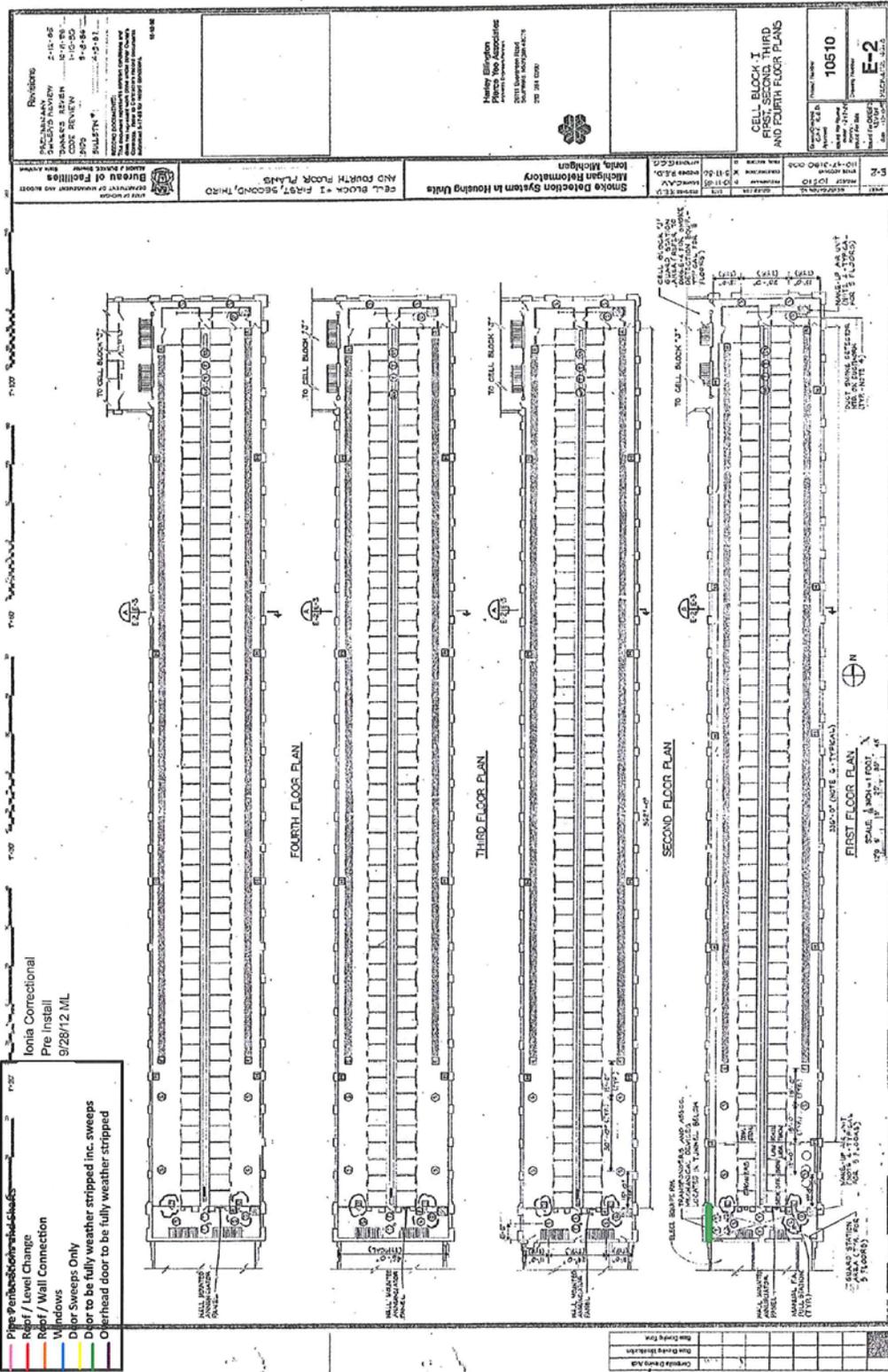
$$\text{Airflow (CFM)} = \text{Opening Area (sq.ft.)} \times \text{Airflow Coefficient} \times (\text{Pressure Differential})^{\text{Pressure Factor}}$$

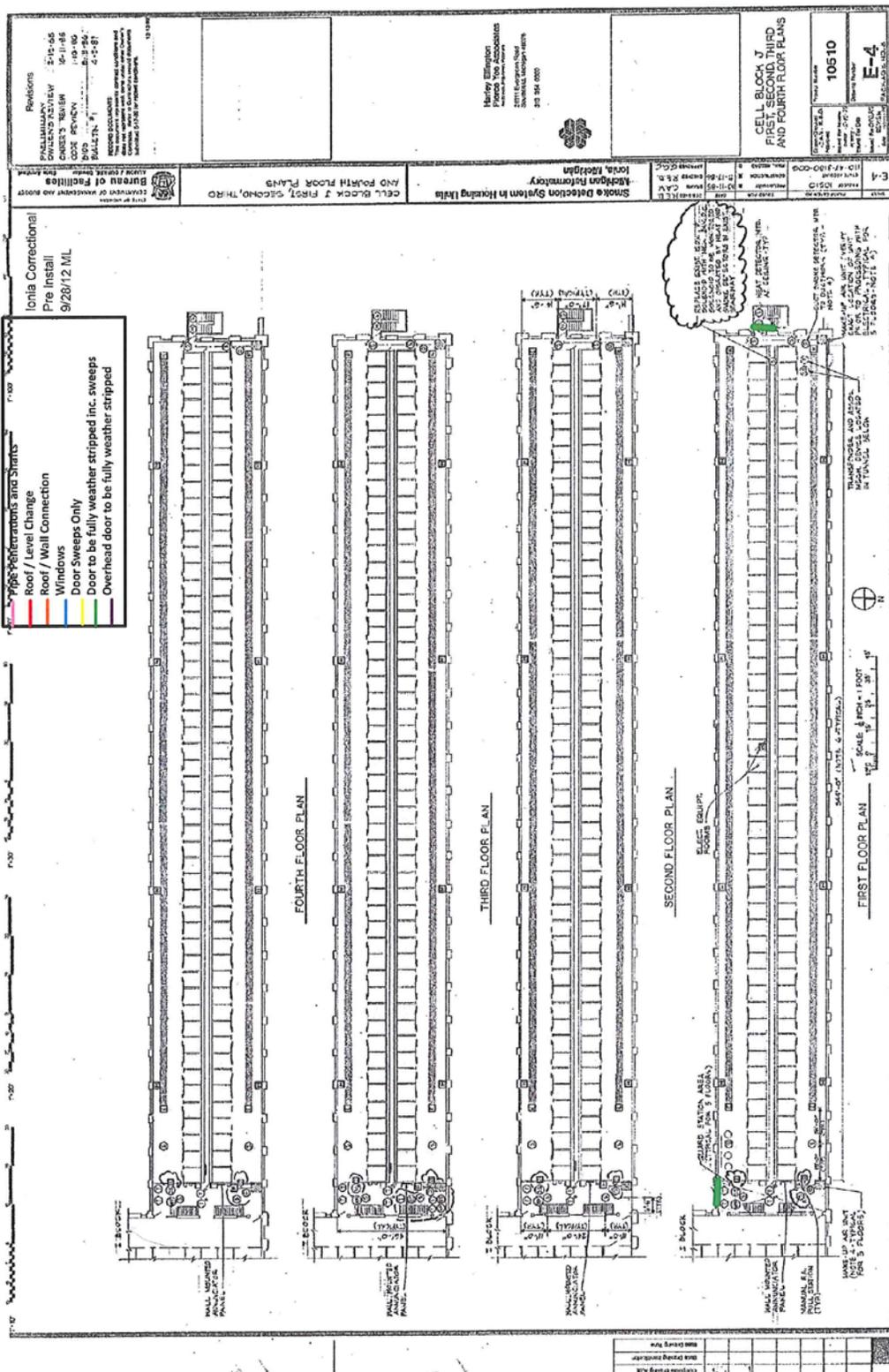
The airflow is based on empirical formulas based on building pressurization techniques:

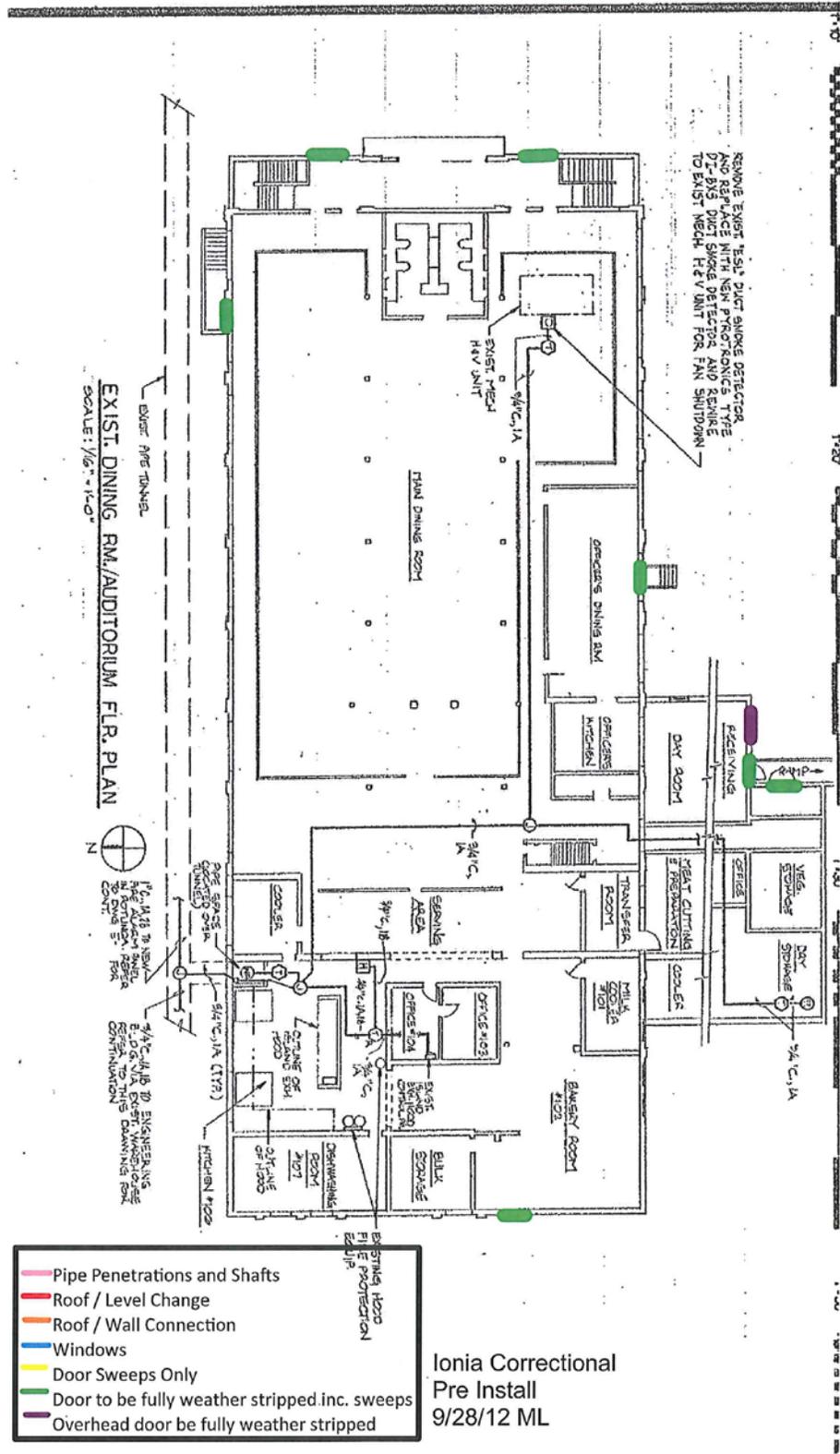
$$\text{Savings (MCF)} = \text{Airflow} \times 1.08 \text{ Btuh/CFM/F} \times \text{Heating Season Hours} \times \text{Temp Differential} / 1,000,000 \text{ BTU/MCF} / \text{Boiler Efficiency}$$

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

Facility	Description	Length (ft.)	Gap (in.)	Opening Area (ft ²)	Airflow (CFM)	Savings (MCF)
Reformatory	Doors	120	1/16	0.63	71	16.8
Reformatory	OH doors	24	3/32	0.19	21	5.0
Reformatory	Windows	500	1/32	1.30	149	35.0
Reformatory	Windows 2	500	1/32	1.30	149	35.0
Reformatory	doors	120	1/16	0.63	71	16.8







Ionia Correctional
Pre Install
9/28/12 ML

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

ECM #4: Water and Sewer Conservation

RECOMMENDED ACTION

We recommend retrofitting the existing domestic plumbing fixtures with new low-flow, higher efficient plumbing savings.

Estimated Water Savings	=30732 KGAL/yr
Estimated Cost savings	=\$247,696/yr
Estimated Gas Savings	= 1,433 MCF/yr
Estimated Cost Savings	=\$ 8,755/yr
Implementation Cost	= \$2,868,715

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

RMI has approximately 1149 inmates housed within the eight (8) units of the facility. The inmate areas contain 952 cells configured with either stainless steel combination fixtures or separate china lavatory and toilet fixtures. Additionally, there are 114 showers located throughout the inmate areas.

The existing stainless steel lavatory/toilet combination fixtures and china 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 3.0 gallons per minute which is much higher than the proposed retrofit units.

PROPOSED SYSTEMS

We recommend utilizing 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.

SCOPES

Unit I and Unit J Retrofits

Unit I and Unit J consists of five tiers that rise one on top of the other with 84 cells on the first floor of Unit I and 96 cells on all remaining tiers in both units. On each tier they have a hallway chase located between behind each set of cells that contain the flush valves and lavatory valves for the cells.

The existing plumbing controls are a mix of Zurn 3.5 gpm and Sloan 3.5 gpf flush valves and mechanical lavatory valves. The existing fixtures are a combination of stainless steel combination units and stainless steel toilets and sinks.

Each inmate's flush valve, **Nine Hundred Forty Eight (948)**, 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, **Nine Hundred Forty Eight (948)**, will be retrofitted with an I-CON lavatory dual manifold. 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.

G Block Retrofits

G Block consists of 78 cells in the unit. On each tier they have a chase located between each set of cells that contain the flush valves and lavatory valves for the cells. The existing plumbing controls are Sloan 3.5 gpf flush valves and mechanical lavatory valves. The existing fixtures are a combination of stainless steel combination units and stainless steel toilets and sinks.

Each inmate's flush valve, **Seventy Eight (78)**, 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, **Seventy Eight (78)**, will be retrofitted with an I-CON lavatory dual manifold. 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.

A Ward Retrofits

A Ward consists of a gang style restroom in the unit. In each restroom, they have a chase located behind each set of fixtures that contain the flush valves and lavatory valves for the cells. The existing plumbing controls are Sloan 3.5 gpf flush valves and mechanical lavatory valves.

The existing fixtures are individual stainless steel toilets in a bank of four toilets, four urinals and 8 sinks

Each inmate's toilet flush valve, **Four (4)**, will be retrofitted with an I-CON flush valve. The existing flush valve stop will remain. Each inmate's urinal flush valve, **Four (4)**, 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 (8)**, will be retrofitted with an I-CON lavatory dual manifold. 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 and running it in conduit to the mechanical closet located in the restroom. We will be installing a 1.0 KVA Buck Boost transformer in the closet to step power down to 24 volts and low voltage wiring inside the wall behind the toilets and urinals to power the controllers. We will be running low voltage wiring in conduit along the ceiling from the closet to the lavatory chase and installing the lavatory controllers in that chase. We will be installing I-CON flush valve only controllers and I-CON lavatory controllers.

I-CON Systems Retrofit – Shower Valve

Each **One Hundred (114)** inmate shower valve mechanical cartridge, or shower valve will be retrofitted with an I-CON VLV-SHW-5775 shower valve in Units I, J, G Block, A Ward. Each inmate's existing push button (or buttons/depending on the existing conditions) will be replaced with an I-CON SEN-1489 sensor button. In locations where a block wall exists, an I-CON CDA-1489 core drill assembly will be utilized.

Units I and Unit J Retrofits

Unit I and Unit J consist of five tiers that rise one on top of the other with showers on each side of the tier. Each tier has a hallway chase for the shower valves that is shared with the toilet and lavatory valves for the cells. The existing shower plumbing controls are a mechanical single temperature metering valve.

Each inmate shower valve **Seventy (70)** will be retrofitted with an I-CON VLV-SHW-5775 Shower Manifold. Each inmate's existing shower valve lever will be replaced with an I-CON SEN-1489 sensor button. In locations where a block wall exists, an I-CON CDA-1489 core drill assembly will be utilized.

Electrical Requirements

Each shower plumbing chase in on the tier will utilize the same 1 KVA Buck Boost transformer installed for the flush valves. In each plumbing chase an I-CON CTR-X12-AC-04-4S-001 I/O controller will be installed.

G Block Retrofits

G Block consists of two shower banks of 5 showers each. Each bank has a chase for the shower valves that is located behind the showers. The existing shower plumbing controls are a mechanical single temperature metering valve.

Each inmate shower valve **Ten (10)** will be retrofitted with an I-CON VLV-SHW-5775 Shower Manifold. Each inmate's existing shower valve lever will be replaced with an I-CON SEN-1489 sensor button. In locations where a block wall exists, an I-CON CDA-1489 core drill assembly will be utilized.

Electrical Requirements

Each shower plumbing chase in on the tier will utilize a .5 KVA Buck Boost transformer installed for the flush valves. In each plumbing chase an I-CON CTR-X12-AC-08-8S-001 I/O controller will be installed.

A Ward Retrofits

A Ward consists of a bank of 8 stainless steel shower cabinets. These showers do have a chase and the shower valves are located behind stainless steel panels. The existing shower plumbing controls are a mechanical single temperature metering valve.

Each inmate shower valve **Ten (10)** will be retrofitted with an I-CON VLV-SHW-5775 Shower Manifold. Each inmate's existing shower valve lever will be replaced with an I-CON SEN-1489 sensor button. In locations where a block wall exists, an I-CON CDA-1489 core drill assembly will be utilized.

Electrical Requirements

Each shower valve is located behind a stainless steel panel in the shower we will utilize the same .75 KVA Buck Boost transformer installed for the flush valves and run the low voltage wire in conduit along the ceiling to each shower. Behind each shower panel an I-CON CTR-X11-S-01-S-001-WP Water Proof I/O controller will be installed.

Low Flow Retrofit

RMI Low Flow Project Totals

Low Flow Plumbing Controls

<i>Description</i>	<i>Quantity</i>
Toilet	77
Faucets	107
Urinals	32

Water Closet Retrofits

Each **Seventy Seven (77)** 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. The existing Floor Mount Wall Outlet water closets will be replaced with a Zurn 1.28 fixture. Locations are shown on the attached application schedule.



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

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 toilet (not including I-CON retrofit) will receive a new Bemis 1055 Toilet Seat.

Staff & Inmate Lavatory Aerators

Each, **Forty Three (43)**, staff and, **Sixty Four (64)**, inmate lavatory faucets will be replaced with either a Symmons S-20, or S-244 faucet and a .5 GPM aerator for the staff or a Symmons S-60 or S-244 for the inmates. The aerators in the inmate areas will be replaced with an I-CON .5 GPM tamper proof model made for institutional use that will insure the aerator stays in place and the savings will continue on a long term basis.

Urinal Flush Valves

Each, **Thirty Two (32)**, staff 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.

RMI 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	1026
I-CON Separate Flush Valve Retrofits	4
I-CON Separate Lavatory Retrofits	8
I-CON Shower Retrofits	114

SAVINGS CALCULATIONS

Water and Sewer Conservation Retrofit

Savings Summary

	Kgal	Water \$/Kgal	Sewer \$/Kgal	Total Savings	MCF	\$/MCF	Total Savings
Reformatory	30,732	\$2.45	\$5.61	\$247,696	1,433	\$6.110	\$8,755

Inmates

Reformatory	1,316
Incoming Water Temper:	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 KGAL (per 1000 gallons) Savings Per Year	
						Fixture Quantity	Uses Per Day Before	Uses Per Day After	Minutes Per Usage Before	Minutes Per Usage After		
RMI	I-Con Flush Valves	1316	3.5	1.6	1.9	1030	22	13			21,128	
	Toilet	1316	3.5	1.5	2	77	20	20			1,124	
	Urinal	1316	1.5	1	0.5	36	10	10			66	
	Lavatory	250	2.2	0.5	1.7	43			4	4	621	
	I-Con Showers	1113	3	2	1	114			10	6	7,312	
	I-Con Lavs	1316	1.5	1.25	0.25	1026			4	4	480	
											Total	30,732

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
RMI	Dorm Showers	350	3	2	105	60	10	6	836	334	502
	Dorm Lavatories	190	2.2	0.5	105	60	4	4	133	30	103
	Common Showers	650	3	2	105	60	9	6	1,398	621	777
	Common Lavatories	650	1.5	1.25	105	60	4	4	311	259	52
										Total	1,433

SYSTEMS RETROFIT – FLUSH VALVE & LAVATORY

Unit I and Unit J Retrofits

Idg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
Unit I	Tier 1	1	Cells 1-84	84	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit I	Tier 2	2	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit I	Tier 2	2	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit I	Tier 3	3	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit I	Tier 4	4	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit I	Tier 5	5	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit J	Tier 1	1	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit J	Tier 2	2	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit J	Tier 3	3	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold
Unit J	Tier 4	4	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold

					3.5 gpf, mechanical lavatory valve .5 gpm		
Unit J	Tier 5	5	Cells 1-96	96	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold

G Block Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
G Block	Tier 1	1	Cells 1-78	78	Stainless Steel Combination Unit 3.5 gpf or separate stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf, mechanical lavatory valve .5 gpm	I-CON 1.6 gpf Flush Valve	I-CON Lavatory Dual Manifold

A Ward Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Toilet Retrofit	Lavatory Retrofit
A Ward	Dorm Area	2	Inmate Restroom	4	Stainless steel toilet and sink, Zurn or Sloan Royal Flush Valve 3.5 gpf	I-CON 1.6 gpf Flush Valve	
A Ward	Dorm Area	2	Inmate Restroom-Urinals	4	Stainless Steel Washout Urinal 1.5 gpf, Sloan Royal Flush Valve 1.5 gpf	I-CON .5 gpf Flush Valve	
A Ward	Dorm Area	2	Inmate Restroom-Sinks	8	Stainless Steel Sinks with Mechanical Lavatory Valves 1.0 gpm		I-CON Lavatory Dual Manifold

SHOWER VALVE - SYSTEMS RETROFIT

Units I and Unit J Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Shower Retrofit
Unit I	Tier 1	1	Showers Room	6	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit I	Tier 2	2	Showers Room	6	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit I	Tier 3	3	Showers Room	6	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit I	Tier 4	4	Showers Room	6	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit I	Tier 5	5	Showers Room	6	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit J	Tier 1	1	Showers Room	8	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit J	Tier 1	1	Showers Room	8	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit J	Tier 1	1	Showers Room	8	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit J	Tier 1	1	Showers Room	8	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
Unit J	Tier 1	1	Showers Room	8	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head

G Block Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Shower Retrofit
G Block	Main Area	1	Showers Room	5	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head
G Block	Main Area	1	Showers Room	5	Single Temperature Mechanical Metering Valve, 3.0 gpm shower head	I-CON Shower Valve, I-CON 2.0 gpm Anti-Suicide Shower Head

A Ward Retrofits

Bldg	Area	Flr	Room	Qty	Existing Description	Shower Retrofit
A Ward	Main Area	1	Inmate Restroom	8	Single Temperature Mechanical Metering Valve, 2.0 gpm shower head	I-CON Shower Valve

ECM #5: Energy Management System

RECOMMENDED ACTION

Control major mechanical equipment that can have an impact on energy savings.

Provide new head end with updated graphics, software (2 year updates), sequences of operation and hands on training.

Estimated Electric Savings	= 43,797 KWH/yr.
Estimated Electric Cost Savings	= \$3,872/yr.
Estimated Gas Savings	= 2,217 MCF/yr.
Estimated Gas Cost Savings	= \$13,544/yr.
Implementation Cost	= \$273,212

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

Energy Savings calculated based on DOE2.

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

EXISTING CONDITIONS

The facility does not have an energy management system. There are several time clocks and setback thermostats on individual equipment, but no central location to set up time schedules or to monitor equipment and temperatures.

Several of the air handlers have Trane DDC controls but have a separate time time clocks and no central control.

PROPOSED SYSTEM

ESG recommends the installation of a basic energy management system. The new system will be LAN/BacNet compatible, open protocol, Tridium compatible and non-proprietary allowing multiple qualified contractors or applied partners in the local geographic area to install, program, repair or maintain the system. The new system will replace the existing time clock that connect to the existing Trane controls. The new system does not need to communicate directly to the existing system if the Trane controls are not LON compatible. All new systems must meet the requirement above.

The EMS will provide greater flexibility in scheduling equipment, troubleshooting and optimizing energy saving strategies (start/stop, occupancy, etc.). Remote monitoring also optimizes the maintenance staff's utilization by allowing remote diagnostics and correction of many HVAC problems without going to the equipment.

This upgrade will provide a new front-end graphical user interface that will allow local or remote monitoring and set point changes.

The existing LAN system in the building will be used to communicate between buildings and the central computer. 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 electric system will be reduced or eliminated.
- C. *Operating Costs* – A properly operating system will save energy.

General scope:

- Install new energy management system
- Install central computer and including graphics
- Sensors required in inmate areas to be covered with a steel plate and securely attached to the wall.
- All wiring in inmate areas to be in conduit securely attached to the wall with tamper proof screws.
- Onsite training.
- 2 year software upgrade.
- Not included: factory controls on gas fired heating equipment, equipment that is disconnected, self-contained control valves, existing electric controls to remain, pipe or duct mounted gauges or thermometers, and package/factory mounted domestic hot water controls.

RMI Points List

	Building	Equip.	Description	Serves	HP SAF/RAF or pump (Estimated)	CFM or gpm/ head (estimated)	% OA	Qty	Start/Stop/Status					Steam/hot water				
									Start/Stop	Status	Space Temp.	FTR valve and act. *1	Zone reset valve and act. *1	Steam Pressure	HWS Temp	HWR Temp		
1	Boiler room	Steam pressure						1							1			
2	Kitchen	steam pressure						1							1			
3	Chapel	Heat exchanger		Chapel HW				1			1		1			1	1	
4	H Ward	AC		Training	2 est	2000	30%	1	1	1	1							
5	D Ward	AHU-3		School	3 est	2000	30%	1	1	1	1							
6	D Ward	AHU-3		School	4 est	2000	30%	1	1	1	1							
7	Library	H&V		Library	5 est	800	30%	1	1	1	1							
8	Dining	AHU-3		Dining	7.5	7500	30%	1	1	1	1							
9	F Ward	RTU (on ground)		Infirmary	2	1600	30%	3	3	3	3							
10	Rec. building (above dining)	FTR	Heating	Recreation area				4			4	4						
11	H ward	FTR	Heating	Training				4			4	4						
12	D ward	FTR	Heating	School				4			4	4						
13	Library	FTR	Heating	Library				4			4	4						
14	F ward	FTR	Heating	Infirmary				4			4	4						
15	Dining	FTR	Heating	Dining				4			4	4						
16	Administration	Split systems	Cooling	offices				6	6	6	6							
17	Administration	FTR	Heating	Offices				6			6	6						
18	A ward (no setback monitor only)	AHU		Inmate	7.5	7000		1	1	1	1							
19	Outside Air temperature																	
20	(10) points to be added																	
									10	10	10	10						
									25	25	58	40	1	2	1	1		
									153									
									Total Estimated Cost		\$ 171,650							

Notes:

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