STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

PASCOAG UTILITY DISTRICT'S 2020	:	
DEMAND SIDE MANAGEMENT PROGRAM	:	DOCKET NO. 4991

COMMISISON'S SECOND SET OF DATA REQUESTS ISSUED TO PASCOAG UTILITY DISTRICT

2-1 Please provide a detailed report of the functions to support the Demand Side Management program performed by the Energy Consultant in 2019, together with copies of all invoices paid to the Consultant.

Answered by Desarae Dolan:
Optimal Energy has provided the following functions to support the Demand Side Management Program:

1. Provided guidance and recommendations on annual Demand Side Management program planning/development/implementation.
   - Aided in aligning energy efficiency funding more closely with sector SBC (system benefits charge) contributions.
   - Assisted with data for the mid-year Demand Side Management filing which was filed with the Rhode Island Public Utilities Commission in August 2019 and for a full year 2020 budget for the Demand Side Management program which was filed in November 2019.
2. Estimated energy and demand savings from program implementation and calculate cost-effectiveness of each Demand Side Management program.
   - Worked on the creation of a detailed data collection and database maintenance process.
   - Produced a final report that included a step by step methodology for calculating program cost-effectiveness, energy savings, cost savings and GHG emission reductions.
3. Assisted PUD with customer-facing communications and messaging on energy efficiency and conservation.

Please see Exhibit 2-1 for a copy of the invoice received to date. Optimal Energy will issue a final invoice in December, not to exceed the agreed upon cost of $10,000.

2-2 Please provide copies of all work product issued to Pascoag by its Energy Consultant to support the Demand Side Management program.

Answered by Desarae Dolan:
Please see Exhibit 2-2 for copies of all work product issued to Pascoag by Optimal Energy. The work products consist of the U.S Energy Information Administration Annual Electric

Power Industry Report and a workbook that allows us to calculate energy savings from each DSM program.
Pascoag had meetings with Optimal Energy on January 30th, May 9th, June 10th, June 27th, July 29th, and August 26th.

2-3 Please provide a copy of the proposed contract for the Energy Consultant for 2020, if one has been drafted. Please also provide a copy of the 2019 contract with the Energy Consultant.

Answered by Desarae Dolan:
Optimal Energy was hired in January of 2019 to provide energy efficiency consultant work for Pascoag. No contracts were signed as we agreed to the scope of work detailed in the Request for Proposals that was submitted to us. Please see Exhibit 2-3 for Optimal Energy's Response to Pascoag's RFP.

2-4 Please provide a detailed breakdown of all costs associated with Strategy 3, Strategy 4 and Strategy 5, as described in the Executive Summary.

Answered by Desarae Dolan:
The costs associated with Strategy 3, Strategy 4 and Strategy 5 for 2020 will be for labor expenses. A percentage of staff time will need to be allotted as opportunities arise for these strategies. Staff time dedicated to these strategies will be taken from the Administration line item. A breakdown of the cost of labor is challenging as we are unsure of how much time will need to be devoted to this exploratory phase.
In 2020, the DSM Coordinator will be investigating whether these strategies will work for Pascoag's customers. Strategy 3 requires outreach to facility managers to gauge interest in subsidized energy-efficient workforce development trainings. This will require the DSM Coordinator to send emails and follow up with phone calls to facility managers in the Pascoag Utility District service territory. Once interest is determined, funds could be allocated in the 2021 DSM Program for a pilot program. Strategy 4 will require the DSM Coordinator to reach out to local banks to see if any are interested in providing a financial product that would work for our customers and not put any additional financial burden on Pascoag. If a bank is found that can provide such services, we would provide a more detailed plan in our 2021 DSM budget. Strategy 5 has been partially completed. We've increased the number of residential energy audits and direct installs tenfold with RGGI funding from OER. We're looking to explore options for a weatherization program for low-income customers which will require the DSM Coordinator to reach out to local agencies such as Tri-Town Community Action and research what other public power utilities are currently doing in this arena. Any program that would be developed for this would be included in detail in our 2021 DSM budget.

2-5 Please provide a copy of the laws that create and/or modify the jurisdictional boundaries of the Pascoag Utility District.

Answered by Michael Kirkwood:
The Pascoag Utility District (PUD) was created by the Rhode Island General Assembly in 2001 and was codified under Title 45, Chapter 45-58, in an act cited as the "Pascoag Utility District Act of 2001" (45-58-1). In the definitions section, 45-58-2(7), Utility service area is defined as "that geographic area located within the boundaries of the Pascoag fire district, as established under the act passed at the May session 1887, entitled "An Act to Incorporate the Pascoag Fire District" as thereafter amended and supplemented from time to time." Further, in Chapter 45-58-4, the service area is more clearly defined as follows: "There is hereby created a quasi-municipal corporation, district and political subdivision of the state, to be known as the Pascoag utility district, the boundaries of which shall be coterminous with the boundaries of the utility service area of the Pascoag fire district ". In addition, in 1957, PUD bought the electric distribution assets of the Harrisville Company, a textile mill complex that had built and was operating an electric distribution system, which expanded PUD's electric service territory to include a good portion of the village of Harrisville.

2-6 If one exists, please provide a copy of the map of the Pascoag Utility District.

Answered by Michael Kirkwood:
Please see Exhibit 2-6, which is an approximate map of PUD's electric service territory, such area encompassing the entire village of Pascoag, and extending to a good portion of Harrisville per the acquisition of the electric distribution assets outlined in Answer 2-5 above from the Harrisville Company. The area denoted as PUD's electric distribution system on this map is that area outlined by white lines and dots.

2-7 For the Battery Storage project referenced as a Non-Wires Alternative in the Executive Summary: Please provide:

a) a copy of the detailed steps of the proposed project

Answered by Michael Kirkwood:
In general, PUD is pursuing a substation expansion and redesign, in which PUD's overall customer load will be split between the two existing feeder circuits from National Grid (currently one circuit acts as the primary circuit for all PUD load, with a fail-over back-up circuit for contingencies that can happen on the main circuit). In addition to this substation work, PUD is also working with a company which installs and operates large utility grade battery storage systems that will allow PUD to dispatch the battery to lower its customer demand during the peak operating hours of the year. The substation work together with the battery storage system will allow PUD to avoid a very costly rebuilding of the two feeder lines from National Grid. The estimated completion of work for both the battery system and the substation upgrade is likely to be in the 3rd quarter 2020.

b) **a copy of the projected cost/budget associated with this project, identifying the source of funds for this project and the program the spending will be budgeted in.**

Answered by Michael Kirkwood:
PUD is currently working with its outside electrical engineering company to estimate the cost of the substation work, but in general, believes that the cost of this work will approximate $2 million. PUD is working with Rhode Island Infrastructure Bank as a possible source of the funds to amortize the substation project. The annual funds to pay down this debt are currently anticipated to come from PUD's capital budget. PUD will not be expending capital for the battery project, but instead will share the savings with the battery vendor resulting from reduced RNS/LNS transmission costs and reduced ISO-NE forward capacity market costs, based on verified reductions in those charges due to the dispatch of the battery to reduce load during annual and monthly peaks. The vendor is financing and will hold title on the battery project and will be paid back its capital through the shared savings mentioned above.

c) **if the project is being funded through the Demand Side Management program, an explanation of how this project qualifies as demand side management under R.I. Gen. Laws § 39-2-1.2(b).**

Answered by Michael Kirkwood:
Neither the substation project nor the battery storage project are being funded through PUD's Demand Side Management program. The reference to this project in the Executive Summary was for informational purposes only.

2-8 **On page 8 of the Executive Summary, Pascoag indicates that it is excited about the proposed changes and is looking forward to restructuring the Demand Side Management program. Please describe in more detail what the restructuring entails and the projected timeline for restructuring.**

Answered by Desarae Dolan:
In early 2018 staff from OER met with management at PUD to determine ways in which they could help address Pascoag's energy efficiency program priorities. Over the course of 2018, OER and PUD worked together to develop the document, "Strategies to Enhance Energy Efficiency in Pascoag Utility District" (Schedule I-Docket 4991). This document served as a road map to examine the existing DSM program, improve upon its successes and restructure the program as necessary. The restructuring work began in the proposed 2020 plan and entails working with our consultant, Optimal Energy and staff at OER, to gain a better understanding of which programs should be kept or changed based on accurate energy savings, working on improved methods for tracking energy savings and developing new programs that address the needs of our customers. We plan to restructure the program over the next two-three years as this is a considerable undertaking for PUD's small staff.

2-9 How do Burrillville Aging Stronger Luncheons benefit ratepayers and help demand side management?

Answered by Desarae Dolan:
Burrillville Aging Stronger (BASC) is a town- wide and town-supported effort to develop and coordinate programs that improve the health and well-being of Burrillville's aging community. The Town is committed to enhancing the quality of life for Burrillville residents, aged fifty-five and older, by providing resources, education, transportation and recreational activities. The Town of Burrillville has committed funding for quarterly "Lunch and Learn" events. The events serve as a way for residents age 55 and older to socialize, have a free lunch and meet with vendors that provide helpful resources. Pascoag was asked to be a vendor at the May 2019 event and was able to spend the time meeting customers one on one and providing information on rebate programs and the home energy audit weatherization program. After speaking with many attendees who were unaware of the programs that Pascoag offers, the DSM Coordinator asked to be a part of the committee to provide outreach on energy efficiency matters. As a committee member, Pascoag would be a permanent fixture at events and be able to include energy efficiency information in any outreach material that BASC sent out.

Based on Burrillville's demographics, roughly a third of our customers are over the age of 55. The Burrillville Aging Stronger Lunch and Learn events are scheduled four times per year and paid for by the Town of Burrillville. The cost to Pascoag is labor expenses for attending meetings/quarterly events throughout the year and energy efficiency materials. We are able to staff an informational table at the event and meet customers over the age of 55 face to face and talk with them about the energy efficiency programs we are offering. By attending these luncheons we've learned that this segment of our customer base is not benefiting by traditional means of program marketing. They aren't getting energy efficiency information by attending the Family Fair or Green Festival. They don't typically use social media or visit our website. A large portion of this population is also on a fixed income and could use extra resources to help them reduce their electric bills. We feel this is a beneficial endeavor that provides energy efficiency outreach to a segment of our customer base that we have had difficulty reaching in the past.

2-10 At page 18 of the filing, Pascoag identified two lighting projects completed in 2019: Ashton Court and Jesse Smith Library. Please provide detailed costs for each of these projects. Further, please provide a copy of the detailed budget detailing the $58,981 planned for Ashton Court in 2020.

Answered by Desarae Dolan:
Please see Exhibit 2-10 for detailed invoices and supporting materials for each project. RISE Engineering was contracted by Ashton Court and Jesse Smith Library to work on these projects. It should be noted that the cost of the Jesse Smith Library lighting project was $37,364. In Schedule C of the DSM filing it stated that the project cost $44,475, which was an error.

2-11 For the Burrillville Assembly Theater lighting project: Please provide detailed costs for this project.

Answered by Desarae Dolan
Please see Exhibit 2-11 for a detailed invoice and supporting materials for this project. Burrillville Assembly Theater contracted with RISE Engineering for this project. The project's initial estimate was $9,129. The final invoice was for $9,955 due to the addition of a dimmer that needed to be installed in the box office to control lighting. It required a dimmer switch, power packs and additional wiring from the attic to the switch.

2-12 Please identify how much money Pascoag spent in each of the past three years on the Burrillville Aging Stronger Luncheons and any other similar event.

Answered by Desarae Dolan
The Burrillville Aging Stronger Luncheon is a new event that began in 2019 and is paid for by the Town of Burrillville. Pascoag Utility has incurred minimal costs by being a member of the Burrillville Aging Stronger Committee and attending the events the Town has hosted thus far. We have spent $508.28 in labor for attending committee meetings and the events in May and August. We have not purchased any materials specifically for this event but have used energy efficiency materials that were left over from previous years' events. Pascoag has not attended any other similar events in the last three years that were marketed towards elderly customers.

2-13 For the Administrative Expense lone item of $21,000, please provide a detailed break-down of this budgeted cost, including the cost of the luncheon for Customer Service Representatives.

Answered by Desarae Dolan:
Below is the estimated budget expenses for the Administration line item in 2020. The majority of this line item is based on the DSM Coordinator's labor expenses for the administration of the DSM program. The figures are a projection based on expenses through September 2019 and projects for 2020. It is often difficult for Pascoag to provide estimates of staff time due to the limitations of working in a small office. Depending on staff workload, a customer service representative, project coordinator or human resources coordinator could be asked to assist with DSM projects during the year.

The cost of the Customer Service Luncheon would be under $150.00 and typically consists of boxed lunches purchased from Panera Bread. Due to staffing constraints it is often hard to conduct training for the customer service representatives as we do not close the office for lunch due to walk in customer traffic. We have found that the easiest way to do this, is to have lunch brought in and conduct training through a lunch break while members from the back office provide coverage for the customer service representatives, in the front office.

Administrative Expense 2020	Amount
Labor-	
Projects	$1101.70
Phone Calls	$3745.91
Rebates	$3390.21
Reporting and 2021 Planning	$7750.28
Community	$2853.62
Supplies & Mileage	$623.72
Legal Fees	$1,372.50
Customer Service Luncheon	$150.00
Totals:	$20,987.94

Labor Costs:

Projects-This accounts for any time spent by staff working with customers on their energy efficiency projects, pre/post inspection for commercial and industrial projects and any time dedicated to the LED streetlight program. In 2020, the District has two significant lighting projects (Ashton Court and the Burrillville High School) that staff time will need to be devoted to.

Phone Calls-This accounts for any time spent by staff answering phone calls related to audits, energy star and rebate questions.

Rebates-This accounts for the time staff spends on processing rebates which includes: calling back customers for additional information, researching whether a product qualifies, inputting the information into our billing system, processing credits, making notes on the customer's account, management approving rebates, sending out letters letting the customer know that the rebate has been processed and filing.

Reporting Requirements and Planning for 2021-This represents the labor spent compiling the information for the full budget, mid-year, reconciliation and data requests each year. It also includes any labor spent on planning for 2021's program (meetings with Optimal Energy, processing reports for energy audits, working on the exploratory phase of Strategies 3, 4 & 5)

Community-This accounts for the meetings and time spent working on conservation activities within the community (prep meetings for BASC, Green Festival, Field Trip and Family Fair).

Supplies & Mileage- This represents any mileage for traveling to meetings, supplies such as paper, envelopes, postage, copies and miscellaneous office supplies we might need for the programs.

2-14 Please provide all details of Pascoag's costs connected to the following events in 2019:

a) Burrillville Family Fair

Answered by Desarae Dolan:
The expenses for the Burrillville Family Fair are listed below.

Burrillville Family Fair	
Staff Labor	$622.49
Breakfast & Lunch for Staff	$79.23
Energy Efficiency Raffle Basket	$75.35
Promotional Energy Efficiency Materials	$720.70
Total:	$1,497.77

b) The Green Festival, if this is an event separate and distinct from the Family Fair

Answered by Desarae Dolan:
The expenses for the Green Festival are listed below.

Green Festival	
Staff Labor-preparation for event	$2,901.30
Staff Labor-day of event	$2,365.76
Breakfast, Lunch & Water for Staff & Volunteers	$331.59
Promotional Energy Efficiency Materials	$3,389.29
Advertisements	$337.93
Misc. Materials	$565.05
Total:	$9,890.92

c) Steere Farm Elementary School's 4th grade field trip.

Answered by Desarae Dolan:
The expenses for the 4th Grade Field Trip are listed below.

4th Grade Field Trip	
Staff Labor	$500.01
Lunch for 4th Graders	$219.75
Energy Efficiency Materials	$153.16
Total:	$872.92

d) Burrillville Aging Stronger Lunch & Learn event held in May 2019

Answered by Desarae Dolan:
The expenses for the Burrillville Aging Stronger Lunch & Learn are listed below.

Burrillville Aging Stronger Lunch & Learn	
Labor	$145.96
Total:	$145.96

2-15 Please provide a detailed budget for the Earth Day Poster Contest.

Answered by Desarae Dolan:
Pascoag proposes the following budget:

2020 Earth Day Poster Contest	Amount
Labor	$1,327.98
Prizes for winners of the event	$100.00
Food for event	$17.99
Cost to produce 450 calendars (Printing and art setup fee) The calendars include energy saving tips, energy saving artwork and information on our DSM program.	$2,097.50
Total:	$3,543.47

2-16 Please provide details for the costs allocated to the Town of Burrillville's Parks and Recreation Department as Pascoag's "partner" in the Green Festival.

Answered by Desarae Dolan:
The Town of Burrillville provided a rough estimate of costs associated with the Green Festival as this is not something they normally break out of their budget.

Town of Burrillville Contribution to Green Festival	
Staff Labor-preparation for event	$1131.00
Staff Labor-day of event	$1356.00
Police Detail	$200.00
Advertisements	$318.00
Promotional give away items	$400.00
Misc. Materials	$245.97
Total:	$3650.97

2-17 Who attends the Burrillville Aging Stronger Committee luncheons mentioned on page 23? Are these only committee members, or are there members of the public in attendance?
Please identify the costs incurred by Pascoag during 2019 for these events.

Answered by Desarae Dolan:
The Burrillville Aging Stronger Luncheons are attended by individuals over the age of 55 that live in Burrillville, which based on demographics information makes up 1/3 of our town population. The costs incurred through September is $508.28 in labor costs from attending the committee meeting and the events held in May and August. We have not purchased any materials specifically for this event but have used energy efficiency materials that were left over from previous years events.

2-18 Please identify with specificity what the $1,000 increase in the Community Events budget is designated for.

Answered by Desarae Dolan:
We increased the budget in Community Events by $1,000 in order to account for labor dedicated to the Burrillville Aging Stronger Lunch and Learn events. Through September, we have spent $507.28 on labor to attend meetings and two Lunch and Learn events. We anticipate that we would spend roughly $1,000 extra in labor costs for Community Events in 2020.

2-19 Please identify with specificity what the $1,000 increase in the Outreach/Education budget is designated for.

Answered by Desarae Dolan:
We increased the budget in Outreach/Education by $1,000 in order to account for fulfilment materials we would like to provide at the Burrillville Aging Stronger Lunch and Learn events. There are four events scheduled for 2020 so we are planning on using $250 per event for copies of Pascoag's energy efficiency program offerings and to purchase energy efficiency guides and informative brochures. Please see Exhibit 2-19 for examples.

2-20 For each incentive proposed in the program related to heating (e.g., space heating or water heating), which ones are aimed at customers who heat with non-electric energy, and how much is budgeted for these incentives to these same customers?

Answered by Desarae Dolan
Due to Pascoag's limited budget, heating incentives weren't designed to specifically be aimed at non-electric energy customers. For water heating measures (i.e. heat pump water heaters), customers who have electric, oil or propane water heating would be eligible to participate in the program. Customers who have gas water heating are not eligible to participate given that they would be eligible to participate through National Grid's gas programs, since National Grid serves gas customers in Burrillville. For the space heating

measures (i.e. heat pumps and mini-split heat pumps), customers who have electric, oil, natural gas or propane space heating are eligible to participate.

Exhibit 2-1

Invoice

Optimal ENERGY

Integrated Energy Resources

10600 Route 116
Suite 3
Hinesburg, VT 05461

June 30, 2019
Project No: 7265
Invoice No: 6821

Desarae Dolan
Pascoag Utility District

Pascoag Energy District
Professional Services from January 1, 2019 to June 30, 2019

Phase 002 Tracking & Reporting
Optimal Staff

	Hours	Rate	Amount	
Guerard, Michael	32.50	195.00	6,337.50	
Johnson, Craig	18.25	130.00	2,372.50	
Totals	50.75		8,710.00	
Total Labor				**8,710.00**
			Total this Phase	**$8,710.00**

Billing Limits	**Current**	**Prior**	**To-Date**
Total Billings	8,710.00	0.00	8,710.00
Limit			10,000.00
Remaining			1,290.00

Total this Invoice **$8,710.00**

If additional information is needed please contact April Clodgo at 802-482-5621 or clodgo@optenergy.com. Federal Tax ID Number: 03-0351557.

Project	7265	Pascoag Energy District	Invoice	6821

Billing Backup

Tuesday, July 30, 2019
1:36:26 PM

Optimal Energy Inc. Invoice 6821 Dated 6/30/2019

Phase 002 Tracking & Reporting

Optimal Staff

		Hours	Rate	Amount
Guerard, Michael	2/1/2019	1.25	195.00	243.75
Review materials from Desarae				
Guerard, Michael	2/8/2019	1.50	195.00	292.50
Data review; follow-up email to Desarae				
Guerard, Michael	4/9/2019	.50	195.00	97.50
Resolve RI billing issue w/ EFG/Richard				
Guerard, Michael	4/16/2019	3.00	195.00	585.00
Planning and prep for next phases				
Guerard, Michael	4/18/2019	1.00	195.00	195.00
Mtg coord; doc review				
Guerard, Michael	4/26/2019	1.00	195.00	195.00
EIA data review				
Guerard, Michael	4/29/2019	2.00	195.00	390.00
EIA data review; planning next steps, mtg coord.				
Guerard, Michael	5/3/2019	1.75	195.00	341.25
Mtg coord and prep				
Guerard, Michael	5/7/2019	3.50	195.00	682.50
Prep for PUD mtg				
Guerard, Michael	5/8/2019	3.00	195.00	585.00
Prep for PUD mtg				
Guerard, Michael	5/9/2019	5.25	195.00	1,023.75
Mtg w PUD in Pascoag, debriefs, travel				
Guerard, Michael	5/13/2019	1.25	195.00	243.75
Follow-up tasks from chk-in mtg				
Guerard, Michael	6/7/2019	2.00	195.00	390.00
Project review, next steps/tasks				
Guerard, Michael	6/10/2019	3.50	195.00	682.50
ConCall with PUD, OER on next steps, tasks, deadlines; prep and debriefs				
Guerard, Michael	6/27/2019	2.00	195.00	390.00
Prep for upcoming mtgs, deliverable; plan review				
Johnson, Craig	2/8/2019	4.25	130.00	552.50
Review existing rebate forms and provide initial feedback. Discuss w/ Mike.				
Johnson, Craig	4/18/2019	.50	130.00	65.00
EIA-861 Reporting - review data for report.				
Johnson, Craig	4/24/2019	1.50	130.00	195.00
EIA-861 Reporting - review data and compile report, emails about the same.				
Johnson, Craig	4/26/2019	.50	130.00	65.00
EIA-861 Reporting - finalize report, emails about the same.				

Project	7265	Pascoag Energy District				Invoice	6821
Johnson, Craig		5/9/2019	3.00	130.00	390.00		
	EE Planning and Reporting meeting and meeting prep and debrief.						
Johnson, Craig		6/6/2019	1.50	130.00	195.00		
	Review data and prep for planning and reporting meeting.						
Johnson, Craig		6/10/2019	1.50	130.00	195.00		
	Planning and reporting meeting; meeting prep.						
Johnson, Craig		6/24/2019	.50	130.00	65.00		
	Review data and coordinate on-site data review.						
Johnson, Craig		6/25/2019	.25	130.00	32.50		
	Coordinate July check-in, emails about the same.						
Johnson, Craig		6/27/2019	4.75	130.00	617.50		
	On-site data collection and review for mid-year report and associated travel time.						
	Totals		50.75		8,710.00		
	Total Labor						**8,710.00**
					Total this Phase		**$8,710.00**
					Total this Project		**$8,710.00**
					Total this Report		**$8,710.00**

Exhibit 2-2

SCHEDULE 6. PART A ENERGY EFFICIENCY PROGRAMS

		RESIDENTIAL (a)	COMMERCIAL (b)	INDUSTRIAL (c)	TRANSPORTATION (d)	TOTAL (e)
		Reporting Year Incremental Annual Savings				
1	Energy Savings (MWh)	51	7	204		262
2	Peak Demand Savings (MW)	0.008	0.004	0.049		0.1
		Incremental Life Cycle Savings				
3	Energy Savings (MWh)	545	86	2,653		3,285
4	Peak Demand Savings (MW)	0.008	0.004	0.049		0.1
		Reporting Year Incremental Costs				
5	Customer Incentives ($1,000s)	22	27	48		97
6	All other costs ($1,000s)	9	2	34		45
		Incremental Life Cycle Costs				
7	Customer Incentives ($1,000s)	22	27	48		97
8	All other costs ($1,000s)	9	2	34		45
		Weighted Average Life for Portfolio (Years)				
9	Weighted Average Life	10.3	13.0	13.00		

	Annual kWh Reported	Annual kWh Calculated	Lifetime kWh	Summer kW	Program Costs
Residential	50537	35395.8	381952	8.36	
Commercial	7002		86259	3.678230196	26768
Industrial	204109		2653417	49.33271	48419

Exhibit 2-2

		2018 Approved Budget	2018 Expenses Jan-Dec	Balance
	Residential Program			
DR1801	ENE Residential Conservation Admin Fees	$ 2,700	$ 2,700	$ -
DR1802	Home Energy Audits with Incentives	$ 4,020	$ 4,020	$ (0)
DR1803	Energy Star Appliance Rebates	$ 6,500	$ 5,759	$ 742
DR1804	Refrigerators/Freezer Buy Back	$ 560	$ 532	$ 28
DR1805	Energy Efficient Windows/Doors	$ 2,300	$ 1,185	$ 1,115
DR1806	Heating System Incentive	$ 3,000	$ 500	$ 2,500
DR1807	ENERGY STAR qualified Water Heaters	$ 600	$ -	$ 600
DR1808	Energy Star Lighting fixtures& ceiling/ventilation fans	$ 650	$ 489	$ 161
DR1809	Home Office Equipment/Home Electronics	$ 1,000	$ 523	$ 477
DR1810	New Construction	$ 1,000	$ 300	$ 700
DR1811	Central Air Conditioning	$ 2,400	$ 2,400	$ -
DR1812	Change a Light Campaign	$ 750	$ 413	$ 337
DR1813	Desk Calendars- with DSM rebate information	$ 1,000	$ 959	$ 41
DR1814	Committed for 2017 Programs	$ 2,100	$ 1,838	$ 263
	Net Residential	**$ 28,580**	**$ 21,618**	**$ 6,962**
	Industrial/Commercial			
DI1801	Energy Star Incentive - Office Equipment	$ 500	$ 75	$ 425
DI1802	Burrillville School Department	$ 45,999	$ 46,000	$ (1)
DI1803	Committed Funds- Lighting & EE Projects	$ 21,566	$ 19,112	$ 2,454
DI1804	Consultation Fees	$ 250	$ -	$ 250
DI1805	Energy Star Commercial Appliance	$ 700	$ -	$ 700
DI1806	LED Street Light Incentive	$ 10,000	$ 10,000	$ -
	Net Industrial/Commercial	**$ 79,015**	**[redacted]**	**$ 3,828**
	Administrative			
DA1801	Administrative	$ 21,000	$ 22,148	$(1,148)
DA1802	Funds for Follow-up to Successful Programs	$ 1,000	$ 720	$ 280
DA1803	Outreach/Education	$ 7,500	$ 7,478	$ 22
DA1804	Jesse Smith Library Partnership	$ 3,700	$ 3,635	$ 65
DA1805	Community Events	$ 8,031	$ 7,916	$ 115
DA1806	Energy Efficiency Management continuing education	$ 2,500	$ 2,838	$ (338)
DA1807	Program Research and Development	$ 500	[redacted]	$ 46

Res Admin	$ 720		
Com Admin	$ 454		
All Other Admin	$ 44,015		
Res Savings	51	19%	$ 8,501.43
Com Savings	7	3%	$ 1,177.89
Ind Savings	204	78%	$ 34,335.59

Exhibit 2-2

January - June 2018

Project	kWh Savings	kW
Appliance Rebates	8151	
Appliance Rebates Committed 2017	1706	
Refrigerator/Freezer Buyback	6215	
Home Office Equipment	214	
Commercial Office Equipment	47	
Central Air Conditioning	9973	
LED Lightbulb Rebates	1670	
	27976	

Other Projects	kWh Savings	kW
Little General	5570	0.92

July - December 2018

Project	kWh Savings	kW
Appliance Rebates	11044	
Refrigerator/Freezer Buyback	3364	
Home Office Equipment	340	
Central Air Conditioning	2243	
LED Lightbulb Rebates	5617	
	22608	

Other Projects	kWh Savings	kW
Binn Building	1569	1.05
Horse Arena	4536	
Burrillville Schools	198539	

Appliance Rebates		
Refrigerators		23
Freezers		2
Clothes Washers		24
Clothes Dryers		13
Dishwashers		38
Air Conditioners		21
Dehumidifiers		14
Air Purifiers		1
Washer/Dry Combo Unit		1
	Total	**137**
Refrigerator BuyBack		8
Home Energy Equipment/Home Electronics		
TVs		7
Printers		3
Desktop Computers		2
Laptop Computers		3
Computer Monitors		2
	Total	17
Commercial Office Equipment		
Printer		1
Air Conditioner		1
	Total	2
Central Air Conditioning		
Air Source Heat Pump Split System		8
Central Air		5
	Total	13
Windows and Doors		
Windows		83
Doors		8
	Total	91

Exhibit 2-2

Measure	kWh	Annual Hours	kW	Peak CF	peak kW	lifetime	Sources	Quantity	Annual kWh	Lifetime kWh	Summer Peak kW
Refrigerators	371	8760	0.04	1	0.04	12	Energy Star Calculator	23	8,533	102,396	1.0
Freezers	272	8760	0.03	1	0.03	12	Energy Star Calculator	2	544	6,528	0.1
Clothes Washers	274		0.04	1	0.04	11	kWh, lifetime from Energy Star calculator; k\	24	6,576	72,336	1.0
Clothes Dryers	160		0.02	1	0.02	12	Ngrid RI programs	13	2,080	24,960	0.3
Dishwashers	40		0.00	0.9	0.00	10	Ngrid RI programs	38	1,520	15,200	0.2
Air Conditioners	36		0.10	1	0.10	8	Ngrid RI programs	21	756	6,048	2.2
Dehumidifiers	168		0.04	0.85	0.03	12	Ngrid RI programs	14	2,346	28,157	0.5
Air Purifiers	391	5840	0.07	0.73	0.05	9	kWh and hours from Energy Star calculator;	1	391	3,519	0.0
Washer/Dry Combo Unit	217		0.03	1	0.03	11.5	Average Clothes Washers/Dryers	1	217	2,496	0.0
Refrigerator BuyBack	897		0.11	1	0.11	8	Ngrid RI programs	8	7,176	57,408	0.9
									22,963	261,639	5.2

Exhibit 2-2

Measure	kWh	Annual Hours	kW	Peak CF	peak kW	lifetime	Sources	Quantity	Annual kWh	Lifetime kWh	Summer Peak kW
TVs	30	1825	0.02	0.73	0.01	6	kWh, hours, and lifetime from Energy Star ca	7	210	1,260	0.1
Printers	47	4392	0.01	0.73	0.01	6	kWh, hours, and lifetime from Energy Star ca	3	141	846	0.0
Desktop Computers	124	6434	0.02	0.73	0.01	4	kWh, hours, and lifetime from Energy Star ca	2	248	992	0.0
Laptop Computers	22	3720	0.01	0.73	0.00	4	kWh, hours, and lifetime from Energy Star ca	3	66	264	0.0
Computer Monitors	6	2336	0.00	0.73	0.00	7	kWh, hours, and lifetime from Energy Star ca	2	12	84	0.0
									677	3,446	0.2

Exhibit 2-2

Measure	kWh	Annual Hours	kW	Peak CF	peak kW	lifetime	Sources	Quantity	Annual kWh	Lifetime kWh	Summer Peak kW
Air Source Heat Pump Split	445		0.74	0.25	0.19	18		8	3,560	64,087	1.5
Central Air	182		0.51	0.25	0.13	18	Ngrid RI Programs	5	908	16,344	0.6
									4,468	80,431	2.1

Exhibit 2-2

Annual kWh	7287
kWh/Bulb	42.1
Bulbs	173
kw/Bulb	0.03
Peak CF	0.14
Peak kW	0.85
Lifetime	5
Lifetime kWh	36435

Exhibit 2-2

Measure	kWh	Annual Hours	kW	Peak CF	peak kW	lifetime	Sources	Quantity	Annual kWh	Lifetime kWh	Summer Peak kW
Printers	47	4392	0.01	0.73	0.01	6	kWh, hours, and lifetime from Energy Star ca	3	141	846	0.0
									141	846	0.0

Exhibit 2-2

Measure	kWh	Annual Hours	kW	Peak CF	peak kW	lifetime	Sources	Quantity	Annual kWh	Lifetime kWh	Summer Peak kW
Air Conditioners	36		0.10	1	0.10	8	Ngrid RI programs	21	756	6,048	2.2
									756	6,048	2.2

Exhibit 2-2

Other Projects	kWh Savings	kW	kWh/kW	Project Type	Peak CF	Peak kW	Lifetime	Lifetime kWh	Com or Ind?	Spending
Little General	5570	0.92	6054	Lighting	0.904	0.83168	13	72410	Ind	2419
Binn Building	1569	1.05	1494	Lighting	0.476	0.4998	13	20397	Com	
Horse Arena	4536	2.1	2160	Lighting	0.476	0.9996	13	58968	Com	
Burrillville Schools	198539	80.97	2452	Lighting	0.599	48.50103	13	2581007	Ind	46000
						1.4994		79365		
Com	6105	3.15								
Ind	204109	81.89				49.33271		2653417		

Exhibit 2-2

Residential Programs Totals	
Program Expenses	$24,964
Annual kWh Electric Savings	28,485
Lifetime kWh Electric Savings	188,743
Summer Peak kW Savings	4.86
Participants	126
Lifetime kWh Electric Savings per Participant	1,498
Cost/Lifetime kWh Electric Savings	$0.13
Lifetime Carbon Reductions (Short Tons)	181

DR1901: Home Energy Audits with Weatherization Incentives	
Program Expenses	$16,673
Annual kWh Electric Savings	18,482
Lifetime kWh Electric Savings	60,881
Summer Peak kW Savings	2.91
Participants	49
Lifetime kWh Electric Savings per Participant	1242
Cost/Lifetime kWh Electric Savings	$0.27

DR1902: Energy Star Appliance Rebates	
Program Expenses	$1,502
Annual kWh Electric Savings	3,178
Lifetime kWh Electric Savings	37,571
Summer Peak kW Savings	0.73
Participants	30
Lifetime kWh Electric Savings per Participant	1,252
Cost/Lifetime kWh Electric Savings	$0.04

DR1903: Refrigerators/Freezer Buy Back	
Program Expenses	$0

DR1904: Energy Efficient Windows/Doors	
Program Expenses	$1,500
Participants	8

DR1905: Heating System Incentive	
Program Expenses	$1,500
Annual MMBtu Gas Savings	61
Lifetime MMBtu Gas Savings	1,031

Commercial & Industrial Programs	
Program Expenses	$24,552
Annual kWh Electric Savings	77,493
Lifetime kWh Electric Savings	1,009,343
Summer Peak kW Savings	10.15
Participants	4
Lifetime kWh Electric Savings per Participant	252,336
Cost/Lifetime kWh Electric Savings	$0.02
Lifetime Carbon Reductions (Short Tons)	463

DI1903: Committed Funds - Lighting & EE Projects	
Program Expenses	$17,027
Annual kWh Electric Savings	75,438
Lifetime kWh Electric Savings	980,696
Summer Peak kW Savings	9.86
Participants	2
Lifetime kWh Electric Savings per Participant	490,348
Cost/Lifetime kWh Electric Savings	$0.02

DI1905: ENERGY STAR Commercial Appliance	
Program Expenses	$300
Annual kWh Electric Savings	2,055
Lifetime kWh Electric Savings	28,647
Summer Peak kW Savings	0.29
Participants	2
Lifetime kWh Electric Savings per Participant	14,324
Cost/Lifetime kWh Electric Savings	$0.01

Exhibit 2-2

Participants	6
Lifetime MMBtu Gas Savings per Participant	172
Cost/Lifetime MMBtu Gas Savings	$1.45

DR1906: ENERGY STAR Qualified Water Heaters	
Program Expenses	$100
Annual kWh Electric Savings	1,667
Lifetime kWh Electric Savings	21,677
Summer Peak kW Savings	0.13
Participants	1
Lifetime kWh Electric Savings per Participant	21,677
Cost/Lifetime kWh Electric Savings	$0.005

DR1907: ENERGY STAR Lighting Fixtures & Ceiling/Ventilation Fans	
Program Expenses	$116
Annual kWh Electric Savings	192
Lifetime kWh Electric Savings	1,646
Summer Peak kW Savings	0.01
Participants	3
Lifetime kWh Electric Savings per Participant	549
Cost/Lifetime kWh Electric Savings	$0.07

DR1908: Home Office Equipment/Home Electronics	
Program Expenses	$81
Annual kWh Electric Savings	70
Lifetime kWh Electric Savings	420
Summer Peak kW Savings	0
Participants	2
Lifetime kWh Electric Savings per Participant	210
Cost/Lifetime kWh Electric Savings	$0.19

DR1909: New Construction	
Program Expenses	$500
Annual MMBtu Gas Savings	20
Lifetime MMBtu Gas Savings	344
Participants	2
Lifetime MMBtu Gas Savings per Participant	172
Cost/Lifetime MMBtu Gas Savings	$1.45

DR1910: Central Air Conditioning

Exhibit 2-2

Program Expenses	$1,450
Annual kWh Electric Savings	1,787
Lifetime kWh Electric Savings	32,161
Summer Peak kW Savings	0.46
Participants	4
Lifetime kWh Electric Savings per Participant	8,040
Cost/Lifetime kWh Electric Savings	$0.05

DR1911: Change a Light Campaign	
Program Expenses	$56
Annual kWh Electric Savings	388
Lifetime kWh Electric Savings	1,938
Summer Peak kW Savings	0.05
Participants	3
Lifetime kWh Electric Savings per Participant	646
Cost/Lifetime kWh Electric Savings	$0.03

DR1912: Committed for 2018 Programs	
Total Program Expenses	**$1,486**
Electric Expenses	***$1,236***
Annual kWh Electric Savings	2,721
Lifetime kWh Electric Savings	32,449
Summer Peak kW Savings	0.57
Participants	17
Lifetime kWh Electric Savings per Participant	1,909
Cost/Lifetime kWh Electric Savings	$0.05
Gas Expenses	***$250***
Annual MMBtu Gas Savings	6
Lifetime MMBtu Gas Savings	105
Participants	1
Lifetime MMBtu Gas Savings per Participant	105
Cost/Lifetime MMBtu Gas Savings	$2.39

Exhibit 2-2

	Planned Budget	Expenses	Balance	% of Budget Spent	Annual Electric Savings (MWh)	Annual Electric Savings (kWh)	Lifetime Electric Savings (MWh)	Lifetime Electric Savings (kWh)	Summer Peak kW Reduction	Annual Gas Savings (MMBtu)	Lifetime Gas Savings (MWh)
Residential Program											
Home Energy Audits w/ Weatherization Incentives	$ 65,000	$16,673	$ 48,327	25.7%	18.5	18,482	61	60,881	2.9		
Enegy Star Appliance Rebates	$ 5,838	$ 1,502	$ 4,336	25.7%	3.2	3,178	38	37,571	0.7		
Refrigerator/Freezer Buy Back	$ 560	$ -	$ 560	0.0%							
Energy Efficient Windows and Doors	$ 1,500	$ 1,500	$ -	100.0%						60.672	1031.424
Heating System Incentive	$ 1,500	$ 1,500	$ -	100.0%							
Energy Star Water Heaters	$ 600	$ 100	$ 500	16.7%	1.7	1,667	22	21,677	0.1		
Lighting Fixtures & Ceiling/Ventilation Fans	$ 650	$ 116	$ 534	17.8%	0.2	192	2	1,646	0.006		
Home Office Equipment	$ 500	$ 81	$ 419	16.2%	0.1	70	0	420			
New Construction	$ 1,000	$ 500	$ 500	50.0%						20.224	343.808
Central Air Conditioning	$ 2,700	$ 1,450	$ 1,250	53.7%	1.8	1,787	32	32,161	0.5		
Change a Light Campaign	$ 400	$ 56	$ 344	14.0%	0.4	388	2	1,938	0.05		
Committed for 2018 Programs	$ 1,500	$ 1,486	$ 14	99.1%	2.7	2,721	32.4	32,449	0.6	6.2	104.7
Enegy Star Appliance Rebates		$ 466	$ (466)		1.1	1,087	13	12,961	0.2		
Refrigerator/Freezer Buy Back		$ 69	$ (69)		0.4	395	3	3,157	0.05		
Energy Efficient Windows and Doors		$ 115	$ (115)		0.0	0	0	0	0.0		
Heating System Incentive		$ 250	$ (250)		0.0	0	0	0	0.0	6.156	104.652
Home Office Equipment		$ 67	$ (67)		0.1	63	0	384	0.0		
Central Air Conditioning		$ 500	$ (500)		0.8	774	14	13,940	0.3		
Change a Light Campaign		$ 20	$ (20)		0.4	401	2	2,007	0.1		
Subtotal	**$ 81,748**	**$24,964**	**$ 56,784**	**30.5%**	**28**	**28,485**	**189**	**188,743**	**4.9**		
	2019 Planne	**Expenses**									
C&I Programs											
Energy Star Office Equipment	$ 500	$ -	$ 500	0.0%							
Burrillville School Department	$ 9,300	$ -	$ 9,300	0.0%							
Committed Funds - Lighting & EE Projects	$ 20,400	$17,027	$ 3,373	83.5%	75.43814136	75,438	981	980,696	9.9		
Consultation Fees	$ 250	$ -	$ 250	0.0%							
Energy Star Commercial Appliance	$ 700	$ 300	$ 400	42.9%	2.05	2,055	29	28,647	0.3		
LED Street Light Incentive	$ 7,225	$ 7,225	$ -	100.0%							
Subtotal	**$ 38,375**	**$24,552**	**$ 13,823**	**64.0%**		**77,493**	**1,009**	**1,009,343**	**10.1**		
Administrative											
Administrative	$ 21,000	$ 7,982	$ 13,018	38.0%							
Energy Consultant	$ 10,000	$ -	$ 10,000	0.0%							
URI Energy Fellow Intern	$ 9,000	$ 5,104	$ 3,896	56.7%							
Program Research and Development	$ 500	$ -	$ 500	0.0%							
Subtotal	**$ 40,500**	**$13,086**	**$ 27,414**	**32.3%**							
Community Outreach, Marketing & Education											
Funds for Follow-up to Successful Programs	$ 1,000	$ 535	$ 465	53.5%							
Outreach/Education	$ 6,500	$ 5,198	$ 1,302	80.0%							
Jesse Smith Library Partnership	$ 3,523	$ 1,321	$ 2,202	37.5%							
Community Events	$ 8,000	$ 513	$ 7,487	6.4%							
Energy Efficiency Management Continuing Education	$ 2,325	$ 772	$ 1,553	33.2%							
Subtotal	**$ 21,348**	**$ 8,339**	**$ 13,009**	**39.1%**							
Total	**$ 181,971**	**$70,941**	**$ 111,030**	**39.0%**							

Exhibit 2-2

Home Energy Audits w/ Weatherization Incentives

Pascoag Measure	*BCR Model Measure*	*QTY*	Net Annual MWh	Net Lifetime MWh	Annual Net Summer kw	Net Annual Gas Savings (MMBTU)	Net Lifetime Gas Savings (MMBTU)	Net Annual Oil Savings (MMBTU)	Net Lifetime Oil Savings (MMBTU)	Net Annual Propane Savings (MMBTU)	Net Lifetime Propane Savings (MMBTU)
LED Bulbs	EnergyWise SF/LED Bulbs	512	16.72	50.15	2.21	0	0	0	0	0	0
Smart Strips	EnergyWise SF/Smart Strip	68	1.47	7.34	0.23	0	0	0	0	0	0
LED Reflectors	EnergyWise SF/LED Bulbs Reflectors	2	0.09	0.27	0.01	0	0	0	0		
Programmable Tstat w/ Oil Heat	EnergyWise SF/THERMOSTAT - Oil Only	2	0.21	3.12	0.46	0	0	6.8	102		

Enegy Star Appliance Rebates

Pascoag Measure	*BCR Model Measure*	*QTY*									
Refrigerator	EnergyWiseSF/Refrig Rebate	4	1.84	22.12	0.23	0	0	0	0	0	0
Air Conditioner	Products/Room Air Conditioner	4	0.09	0.73	0.26	0	0	0	0	0	0
Clothes Washer	EnergyStar Homes/Cwasher	5	0.17	1.83	0.06	0	0	0	0	0	0
Clothes Dryer	Products/Dryer	7	0.62	7.43	0.09	0	0	0	0	0	0
Dehumidifier	Products/Dehumidifier Rebate	4	0.39	4.71	0.08	0	0	0	0	0	0
Dishwasher	EnergyStar Homes/Dishwash	5	0.02	0.18	0.00	0	0	0	0	0	0
Freezer	N/A - Used Gross kWh savings in ENERGY STA	1	0.05	0.58	0.01						

Heating System Incentive

Pascoag Measure	*BCR Model Measure*	*QTY*									
Gas Boiler	Gas/HVAC/COMBO CONDENSING 95	6	0.00	0.00	0.00	60.672	1031.424	0	0	0	0

New Construction

Pascoag Measure	*BCR Model Measure*	*QTY*									
Gas Boiler	Gas/HVAC/COMBO CONDENSING 95	2	0.00	0.00	0.00	20.224	343.808	0	0	0	0

Energy Star Water Heaters

Pascoag Measure	*BCR Model Measure*	*QTY*									
Electric HPWH	HVAC/Water Heater, Heat Pump <55 gallon	1	1.67	21.68	0.13	-0.083	-1.079	-0.415	-5.395	-0.0581	-0.7553

Lighting Fixtures & Ceiling/Ventilation Fans

Pascoag Measure	*BCR Model Measure*	*QTY*									
Fixtures	LED Bulb (Fixture)	2	0.04	0.18	0.00	-0.053059941	-0.2652997	-0.032252121	-0.16126061	-0.008323128	-0.04161564
Linear	LED Bulb (Linear LED)	1	0.01	0.09	0.00	0	0	0	0	0	0
Ceiling Fan w/ Lights	N/A - Used Energy Star	1	0.15	1.38	0.00						

Central Air Conditioning

Pascoag Measure	*BCR Model Measure*	*QTY*			
ASHP	HPS16SEER8.5HSPF	1	0.49	8.78	0.07
ASHP	HPS18SEER9.6HSPF	1	0.52	9.45	0.07
DMSHP	HPS20SEER11HSPF Mini-split	2	0.77	13.94	0.32

Change a Light Campaign

Pascoag Measure	*BCR Model Measure*	*QTY*									
Bulbs	LED Bulb	28	0.39	1.94	0.05	-0.419262228	-2.0963111	-0.254845668	-1.27422834	-0.065766624	-0.32883312

C&I Project - Jesse Smith Library

Pascoag Measure	*BCR Model Measure*	*QTY (kWh)*									
C&I Interior Lighting	EI Light	54951	47.82	621.68	9.86	-14.34643124	-186.50361	0	0	0	0
C&I Exterior Lighting	Used EI Light, but w/ Streetlight inputs for pe	13583	11.82	153.67	0.00	0	0	0	0	0	0

C&I Project - Ashton Court

Pascoag Measure	*BCR Model Measure*	*QTY (kWh)*									
C&I Exterior Lighting	Used EI Light, but w/ Streetlight inputs for pe	18151	15.80	205.35	0.00	0	0	0	0	0	0

C&I Appliances

Pascoag Measure	*BCR Model Measure*	*QTY*									
Electric HPWH	HVAC/Water Heater, Heat Pump <55 gallon -	1	1.67	21.68	0.13	-0.083	-1.079	-0.415	-5.395	-0.0581	-0.7553
DMSHP	HVAC/HPS20SEER11HSPF Mini-split - Not a R	1	0.39	6.97	0.16						

Exhibit 2-2

Total Electric Benefits ($)	Total Gas Resource Benefits ($)	Total Oil Benefits ($)	Total Other Resouce Benefits ($)	Total Non-Energy Impacts	Total Avoided Non-Embedded Carbon Benefits ($)	Total NOX Benefits ($)	Economic Benefits (One-Time $)	Total Benefits	Annual Carbon Reductions (Short Tons)	Lifetime Carbon Reductions (Short Tons)
$11,396	$0	$0	$0	$1,355	$3,361	$67	$0	$16,177	7.9	23.6
$1,613	$0	$0	$0	$0	$487	$10	$0	$2,109	0.7	3.5
$61	$0	$0	$0	$5	$18	$0	$0	$85	0.0	0.1
$2,784	$0	$2,298	$0	$105	$1,002	$81	$0	$6,270	0.6	9.7
3321.2825	0	0	0	5.7732328	1414.168066	28.843579	0	$4,770	0.866304	10.395648
992.835835	0	0	0	0	46.78966727	0.8115349	72.74273328	$1,113	0.0426384	0.3411072
465.19574	0	0	0	0	117.5283462	2.4054274	0	$585	0.0781704	0.8598744
1213.24227	0	0	0	0	475.5796711	9.700691	167.5810718	$1,866	0.29104656	3.49255872
805.28781	0	0	0	0	297.7161142	5.2099788	57.47368717	$1,166	0.184515533	2.214186394
27.5710628	0	0	0	0	11.61891169	0.2372008	0	$39	0.00846	0.0846
86.3905005				1.4433082	36.78419012	0.7502557	0	$125	0.022533595	0.270403145
0	9644.480082	0	0	212.226979	5912.493645	555.87547	11510.45506	$27,836	3.549312	60.338304
0	3214.826694	0	0	70.7423265	1970.831215	185.29182	3836.818353	$9,279	1.183104	20.112768
2847.39996	-8.641723219	-119.71	-23.3699515	0	1341.07728	23.658429	0	$4,060	0.74140995	9.63832935
38.044352	-2.480611903	-3.16083	-1.17471812	2.93623012	10.4969868	0.2349453	0	$45	0.010448577	0.052242883
11.7366232	0	0	0	1.35310144	5.374319918	-0.3140826	6.946281539	$25	0.00251685	0.0402696
1229.76538				53.3845424	544.8659479	11.673074	302.2287371	$2,142	0.229127975	4.124303548
1290.05265				53.3845424	586.5477104	12.566054	904.5212489	$2,847	0.246656062	4.439809118
3242.03692				86.7351963	865.5585827	18.543514	765.7182993	$4,979	0.363986199	6.551751579
414.260722	-19.60098058	-24.9758	-9.28223678	27.4048144	118.2055765	0.4091952	32.88577734	$539	0.132529408	0.662647041
109936.206	-1595.789615	0	0	16294.3914	39494.5315	659.8292	11292.8687	$176,082	21.63680938	281.2785219
14434.7033	0	0	0	4027.71048	9729.967068	194.16234	2791.414815	$31,178	5.555723007	72.22439909
19289.1334	0	0	0	5382.24051	13002.18157	259.45966	3730.175241	$41,663	7.424127828	96.51366177
2847.39996	-8.641723219	-119.71	-23.3699515	0	1341.07728	23.658429	0	$4,060	0.74140995	9.63832935
1621.01846				43.3675981	432.7792914	9.2717569	382.8591497	$2,489	0.181993099	3.275875789

Exhibit 2-2

Pascoag Measure	*BCR Model Measure*	*QTY*	Net Annual MWh	Net Lifetime MWh	Annual Net Summer kw	Net Annual Gas Savings (MMBTU)
Enegy Star Appliance Rebates						
Pascoag Measure	*BCR Model Measure*	*QTY*				
Refrigerator	EnergyWiseSF/Refrig Rebate	2	0.92	11.06	0.11	0
Clothes Washer	EnergyStar Homes/Cwasher	2	0.07	0.73	0.03	0
Clothes Dryer	Products/Dryer	1	0.09	1.06	0.01	0
Dishwasher	EnergyStar Homes/Dishwash	3	0.01	0.11	0.00	0
Refrigerator/Freezer Buy Back						
Pascoag Measure	*BCR Model Measure*	*QTY*				
Side by Side Fridge	Products/Refrigerator Recycling (Primary)	1	0.39	3.16	0.05	0
Heating System Incentive						
Pascoag Measure	*BCR Model Measure*	*QTY*				
Gas Furnace	Gas/HVAC/Furnace95ECM	1	0.00	0.00	0.00	6.156
Central Air Conditioning						
Pascoag Measure	*BCR Model Measure*	*QTY*				
DMSHP	HPS20SEER11HSPF Mini-split	2	0.77	13.94	0.32	
Change a Light Campaign						
Pascoag Measure	*BCR Model Measure*	*QTY*				
Bulbs	LED Bulb	29	0.40	2.01	0.06	-0.434235879

Exhibit 2-2

Net Lifetime Gas Savings (MMBTU)	Net Annual Oil Savings (MMBTU)	Net Lifetime Oil Savings (MMBTU)	Net Annual Propane Savings (MMBTU)	Net Lifetime Propane Savings (MMBTU)	Total Electric Benefits ($)	Total Gas Resource Benefits ($)	Total Oil Benefits ($)	Total Other Resouce Benefits ($)	Total Non-Energy Impacts	Total Avoided Non-Embedded Carbon Benefits ($)	Total NOX Benefits ($)	Economic Benefits (One-Time $)
0	0	0	0	0	1660.64125	0	0	0	2.8866164	707.0840332	14.42179	0
0	0	0	0	0	186.078296	0	0	0	0	47.01133846	0.962171	0
0	0	0	0	0	173.320324	0	0	0	0	67.93995301	1.385813	23.94015311
0	0	0	0	0	16.5426377	0	0	0	0	6.971347012	0.1423205	0
0	0	0			550.984929	0	0	0	0	205.8840054	4.1551472	63.5055608
104.652	0	0			0	978.5637424	0	0	586.10532	599.9029351	56.401131	796.9081895
					3242.03692				86.7351963	865.5585827	18.543514	765.7182993
-2.1711794	-0.263947299	-1.3197365	-0.068115432	-0.34057716	429.055748	-20.3010156	-25.8678	-9.6137452	28.3835578	122.4272042	0.4238093	34.06026938

Exhibit 2-2

Total Benefits	Annual Carbon Reductions (Short Tons)	Lifetime Carbon Reductions (Short Tons)
$2,385	0.433152	5.197824
$234	0.03126816	0.34394976
$267	0.04157808	0.49893696
$24	0.005076	0.05076
$825	0.1854996	1.4839968
$3,018	0.360126	6.122142
$4,979	0.363986199	6.551751579
$559	0.137262601	0.686313007

Exhibit 2-2

Energy Efficient Windows and Doors

	2018	*2019*	*2019-DC1901*	*QTY*
Windows	5	80	47	132
Doors	1	8	2	11
Participants	2	8	5	15

Lighting Fixtures & Ceiling/Ventilation Fans

Pascoag Measure	*BCR Model Measu*	*QTY*	
Ceiling Fan w/ Light Kit	N/A	1	2019
From ENERGY STAR Calculator			
kWh Savings	151		
Lifetime kWh	1382		

Home Office Equipment

Pascoag Measure	*BCR Model Measu*	*QTY*
TV	N/A	3
Computer Monitor	N/A	1

Equipment Type	Rebate Year	Annual kWh	Lifetime kWh	Source
50" TV	2019	40	241	Energy Star Caclulator
43" TV	2019	30	180	Energy Star Caclulator
55" TV	2018	55	331	Energy Star Caclulator
Computer Monitor	2018	7.6	53.5	Energy Star Caclulator

Optimal ENERGY *Integrated Energy Resources*

Exhibit 2-3

Proposal to Provide Energy Efficiency/Conservation Program Planning Consultant Services

Prepared for

The Pascoag Utility District

PASCOAG UTILITY DISTRICT

by:

Optimal Energy, Inc.

January 11, 2019

Optimal Energy, Inc.
401-378-7422

www.optenergy.com

460 Harris Ave., Unit 101
Providence, RI 02909

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OVERVIEW

Optimal Energy, Inc. (Optimal) welcomes the opportunity to expand its successful role supporting the Energy Efficiency and Resource Management Council (EERMC) in its responsibility to assure that the Rhode Island Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006 (Least Cost Procurement law) is effectively executed. That law established a comprehensive energy policy that explicitly and systematically requires maximization of ratepayers' economic savings through investments in all cost-effective energy efficiency. Optimal has been part of the consultant team since the inception of the EERMC, and brings extensive knowledge and skill sets that we propose meets all of the tasks in this scope of work for the Pascoag Utility District. We propose to deliver services with high quality and maximum efficiency given our deep experience and understanding of program design, tracking and reporting required to meet Least Cost Procurement Law. While our response to this request for proposal (RFP) features an extension of many of the roles we currently provide to the EERMC, we will work closely to understand and support the unique aspects of the Pascoag Utility District's territory.

The RFP lists three tasks to support the design, promotion and delivery of programs, including the documentation of planned and actual savings in a format consistent with the Rhode Island Public Utility Commission's (PUC) Docket #4600. Optimal has a strong understanding of the requirement of these tasks, as they are all requirements we fulfil as consultant to the EERMC. It will be our objective to tailor our current set of similar deliverables to meet the needs of Pascoag Utility District.

The next few years will be a critical period to position the Pascoag Utility District's energy efficiency programs. While we understand the RFP only seeks support for the 2020 plan filing, the necessary groundwork and infrastructure development that will be needed in future years should be a core consideration of any annual plan. Also, significant challenges are on the horizon or have already begun to appear in program savings potential. Foremost among these is the massive shift in lighting technology that will rapidly diminish the largest source of savings from most efficiency programs. At the same time, utilities and regulators are realizing the need for coordinated efforts to address a range of related needs: addressing peak demand through control and response, supporting distributed energy resources, strategic electrification to support long-term carbon reduction, absorbing new loads from electrification of vehicles and space heating, and retail competition, just to name a few. Our team will draw on our knowledge of Rhode Island's unique policy and programmatic context to recommend strategies that are effective and appropriate for the Pascoag Utility District's demographics. Our strategy support will seek to pursue innovation that builds on the existing strengths of Pascoag Utility District's delivery infrastructure, Rhode Island trade allies and workforce, and local partner institutions.

COST PROPOSAL AND SCOPE OF WORK

TASK 1

Providing guidance and recommendations on annual Demand Side Management program planning/development/implementation

- **Aid in aligning energy efficiency funding more closely with sector SBC (system benefits charge) contributions.**
- **Assistance with data for the mid-year Demand Side Management filing due to the Rhode Island Public Utilities Commission in August 2019 and for a full year 2020 budget for the Demand Side Management program due November 2019.**

Optimal Energy, Inc., is prepared to provide key insights into program planning, design and implementation oversight based on extensive work in this area across Rhode Island through our work for the EERMC. Further, we are already familiar with the Pascoag Utility District's 2019 Plan filed in RI PUC Docket 4894, as well as having reviewed past portfolio's from recent years. In addition to familiarity with the strategy and tactical considerations for energy efficiency portfolios in Rhode Island, Optimal Energy is also contracted to provide these services in states adjoining Rhode Island through our work for the Massachusetts Energy Efficiency Advisory Council, the Connecticut Energy Efficiency Board and the Connecticut Municipal Energy Efficiency Cooperative.

While we propose to provide support of this task with two individuals (Mike Guerard and Craig Johnson), they are significantly supported by insights gathered through work in the neighboring jurisdictions that have subject-matter experts in all components needed to build dynamic energy efficiency portfolios. These insights also require consideration of the Task bullet item relating to aligning SBC contributions with the balance of portfolios to equitably spread services to the maximum range of customer classes possible.

For reporting purposes, the success of delivering on Task 2 expectations for a solid tracking and reporting structure will lend to efficient and sufficient reporting to the PUC. Reporting such as this is a staple of most of the related work we conduct for clients, and we are well-prepared to provide accurate and timely reporting in formats that optimize communication and transfer of information.

Task 1			
Labor costs			
Team member	Hourly rate	Estimated hours	Evaluated Price
Mike Guerard	$195	8	$1,560
Craig Johnson	$130	25	$3,250
Additional expenses			

Description of Expense	Price
Not applicable	Not applicable
Total Task Price	$4,810

TASK 2

Estimating energy and demand savings from program implementation and calculating cost-effectiveness of each Demand Side Management program (by sector) using the RI Test as defined by PUC Docket 4600.

- **Creation of a detailed data collection and database maintenance process.**
- **A final report that would include a step by step methodology for calculating program cost-effectiveness, energy savings, cost savings and GHG emission reductions.**

Given the Pascoag Utility District has successfully filed for, and implemented, programs for many years, an existing system is in place to deliver the elements of this task at a functional level. Pending review and discussion on the current system, we could focus our efforts to update and enhance that system to accommodate changes that will stem from broader application of the RI Test-required data and factors that will continue to evolve as new benefits are identified and sufficiently quantified. Alternatively, we could also propose adopting with modifications an existing set of systems and processes that we have already developed and are utilizing with clients that are small utilities similar in size to the Pascoag Utility District. To illustrate that vision, we will first explain our existing process and will follow that up with a description of how that process could be modified for the purpose of meeting the future needs of the Pascoag Utility District.

In 2015 we worked with the Connecticut Municipal Electric Energy Cooperative (CMEEC) and its six-member utilities to streamline and centralize their database of energy efficiency programs. In doing so, we developed a reporting workbook titled the Tracking and Spending Report (TPS Report). Each month, CMEEC's member utilities fill out the TPS Report with all their projects and spending for that month. They then submit the TPS Report along with all "raw" measure implementation and cost data via our ShareFile site. We then review their data and TPS report to confirm its accuracy and then process those projects into a centralized, web-enabled database which calculates savings for all installed projects. The database is then used for the purpose of reporting out spending and savings achieved by each utility.

We recognize that a costly centralized, web-enabled database is beyond the scope of Pascoag Utility District's needs. Given this, we plan to replace the web-enabled database part of the process with another tool that we developed in 2017 for the Town of Block Island. This tool is already set up to handle all the needs of calculating cost-effectiveness using the RI Test as defined by PUC Docket 4600. We would then describe the methodologies used in this tool for the purpose of documenting the calculation of program cost-effectiveness, cost of savings, and GHG emissions reductions.

Much of the remaining process described above would remain intact except for the frequency of data submissions. Given that Task 1 asks for assistance with mid-year and annual filings, we would recommend submission of the TPS Report and backup data on a quarterly basis.

Task 2			
Labor costs			
Team member	Hourly rate	Estimated hours	Evaluated Price
Mike Guerard	$195	4	$760
Craig Johnson	$130	25	$3,250
Additional expenses			
Description of Expense		Price	
Not applicable		Not applicable	
Total Task Price		$4,010	

TASK 3

Optimal has been engaged in providing communications and messaging on energy efficiency to a wide range of Rhode Island constituencies via our work for the EERMC. These insights and established communication links and messaging can be easily and efficiently provided to the Pascoag Utility District to serve as a solid base to start from. Our work on this task would then allow focus on how this can be tailored and/or supplemented for Pascoag Utility District customers.

Task 3			
Labor costs			
Team member	Hourly rate	Estimated hours	Evaluated Price
Mike Guerard	$195	6	$1,170
Additional expenses			
Description of Expense		Price	
Not applicable		Not applicable	
Total Task Price		$1,170	

COST PROPOSAL – ALL-INCLUSIVE PRICE

As the tables above reflect and given our local presence, Optimal is not proposing any travel, travel time or other indirect expenses beyond labor hours to effectively deliver all tasks.

Cost proposal – all-inclusive price	
Vendors name	Optimal Energy, Inc.
All-inclusive price	$9,990

PROJECT ORGANIZATION AND STAFFING

PROJECT ORGANIZATION

To effectively deliver all components of the scope efficiently and with high quality in a timely manner, Optimal proposes a team of experienced staff based in Optimal's Providence office within 30 minutes of Pascoag[1]. Mike Guerard, a Managing Consultant at Optimal for the last 10 years with over 30 years of experience in the energy efficiency industry, will oversee the project and contribute to key task elements. He also is the manager of Optimal's work for the EERMC and is fully versed in the policy and regulatory issues in Rhode Island, as well as having deep insight into the planning, strategy and execution of National Grid's efficiency programs since 2008 that have resulted in Rhode Island being a national leader in efficiency programs. He will be supported by Craig Johnson who will conduct the majority of the analysis and data-related aspects, along with providing support on program strategy and planning. He has been engaged in similar projects in multiple jurisdictions and is well prepared to efficiently and effectively cover all task areas.

STAFFING

Mike Guerard: Project management and contract oversight. Mr. Guerard will be the primary point of contact for Pascoag Utility District staff to confirm objectives, deliverables and timelines and assure effectively delivery of all work meeting all those expectations. Based on his extensive work in program planning in multiple jurisdictions, with a specific reference point to programs operating in Rhode Island, he will also be the lead for advising and supporting consideration of program planning and budgeting. He will also lead the support on customer-facing communication and messaging.

Craig Johnson: Data formatting, inputs and review; cost-effectiveness modeling and reporting; program strategy and implementation monitoring. Mr. Johnson will be responsible for providing analytical support and program oversight to ensure that Pascoag Utility District's stated objectives are successfully achieved. He will be responsible for the development of the detailed data collection and maintenance process along with the mid- and year-end PUC filings and the final cost-effectiveness report.

[1] Optimal staff will work with the client to determine the appropriate frequency of visits to Pascoag Utility District's offices and will not bill the client for any travel time it incurs.

RELATED EXPERIENCE AND REFERENCES

RELATED EXPERIENCE

Below, we provide information on similar projects and that we believe are examples of our capabilities and proven consulting support.

Technical Consultant for Energy Efficiency Councils

- **Rhode Island Energy Efficiency & Resource Management Council, 2007 – present**
- **Massachusetts Department of Energy Resources, 2010 – present**
- **Delaware Department of Environmental Resources, 2015-present**

Optimal Energy is the prime contractor for energy efficiency councils in three states, managing teams of technical experts and strategists. Mike Guerard and Craig Johnson have played a role on all of these projects which require the fulfillment of tasks similar to those requested by the Pascoag Utility District. Key tasks performed in these projects include goal-setting, program design and implementation support, strategic planning, cost-effectiveness screening, and EM&V planning and review. In Massachusetts, this has involved being tasked with overseeing the planning and implementation of the Commonwealth's $2.4 billion plan for energy efficiency in 2016-2018. We advise the 25 commercial and industrial, residential, multifamily, and low-income programs and initiatives, lead a $70 million EM&V effort that generates more than 40 completed studies each year, and advise and analyze demand response efforts. In Delaware, Optimal has provided consulting support since the council's inception, using our experience with growing energy efficiency programs elsewhere to guide the initiation and launch of new efficiency efforts in that state. This included setting initial savings targets, guiding the creation of regulations for EM&V, and working to coordinate the efforts of diverse program administrations that includes utilities, public power entities, a state agency, and a pre-existing statewide sustainable energy utility. We have met the unique challenges posed by this project through frequent communication with all stakeholders, a focus on educating the new council, and efforts to apply knowledge from more advanced jurisdictions. In Rhode Island, Optimal's work for the EERMC requires full participation with all stakeholders in supporting the development, design, oversight and tracking and verification on nation leading programs.

Technical Advisors and Consultants for Municipal utilities

- **Connecticut Municipal Electric Energy Collaborative (CMEEC)**
- **Town of Wallingford, Connecticut**

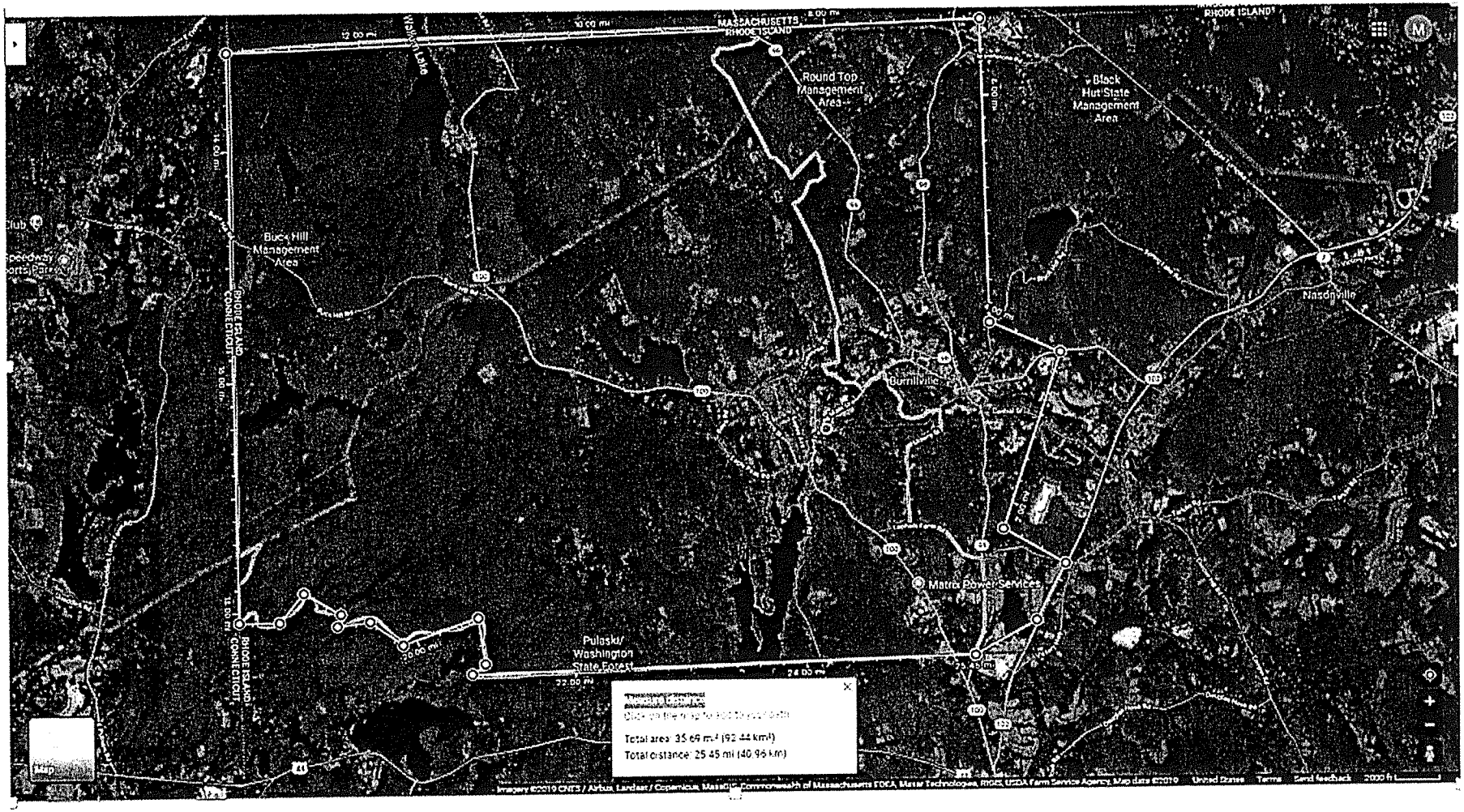
Optimal has been serving the Connecticut Municipal Electric Energy Cooperative, a public power entity that provides electric services to several municipal utilities and participating wholesale customers, since 2007. The participating municipal utilities, in turn, provide electricity to roughly 100,000 residential, commercial/industrial and small business customers. In addition to work for the group of municipalities, Optimal also provides direct services for the town of Wallingford, Connecticut. Mike Guerard is the project manager for both clients, and Craig Johnson is the lead analyst on both projects. The work for these clients includes data tracking and review,

annual energy efficiency plan preparation, and support and documentation for submitting savings to ISO's Forward Capacity Market.

REFERENCES

Becca Trietch
Administrator, Energy Efficiency Programs
Rhode Island Office of Energy Resources
401- 574-9106

Walt Szymanski
Energy Conservation Specialist
Town of Wallingford, Connecticut
203-294-2280



Pascoag Utility District's Service Territory

Exhibit 2-6

Exhibit 2-10

RISE ENGINEERING

Division of Thielsch Engineering, Inc
1341 Elmwood Avenue
Cranston, Rhode Island 02910

Invoice #
June 25, 2019
Page Number 1
Net 30

Burrillville Housing Authority - Ashton Court
77 Ashton Court
Harrisville RI 02830
William Valentine

Project #: RIS-88-19-0256

Furnished and installed energy efficient equipment pursuant to contract dated 3/29/2019

Ship To: Burrillville Housing Authority - Ashton Court
77 Ashton Court
Harrisville
William Valentine
4015686200

	ECM				TOTAL COST
UTILITY VERSION Customer Invoice:					
	ECM: Lighting & Sensors				
	LIGHTING & CONTROLS TOTALS				
	Materials				**$ 8,212.68**
	Labor				**$ 8,226.18**
	Misc Costs (lifts, recycling, permits, brackets, etc.)				**$ 3,981.62**
	GRAND TOTAL				**$ 19,929.00**
	Customer Deposit				**$ (3,973.00)**
	Pascoag Electric Incentive	2/22/2019			**$ (7,636.00)**
	Program Net Invoice Total				**$ 8,320.00**

Prepared: 12/3/2019

THIELSCH ENGINEERING, INC.

(FOR INSTALLER ONLY)

LABOR ORDER

Date: 4/30/2019

Lab No. RIS-88-19-0256

RISE PM Name: Joe Conlon

Dept.: 88

Burrillville Housing Authority - Ashton Court
77 Ashton Court
Harrisville RI 02830
William Valentine
(401) 568-6200

Suggested Contractor ENTER ON PI TAB

P.O. #

	FIXT TYPE	INSTALLED QUANTITY	DESCRIPTION	PART NO
1	H1	42	RELAMP WITH 45W LED E39 LAMP	40HIDWP/850/277V/EX39
2	H2	4	NEW FIXTURE 62W LED SLIP FIT WITH PT-2 (180) BRACKETS	CRE-62W-T3M0000RIS82
3	H3	1	NEW FIXTURE 62W LED SLIP FIT (WITH WN4 BRACKETS)	CRE-62W-T3M0000RIS82
4	H4	4	NL 18W LED PAR 38	SYL LED16PAR38/DIM/827/FL40 78436
5	H5	2	NEW FIXTURE 62W LED SLIP FIT WITH PT-1 (90) BRACKETS	CRE-62W-T3M0000RIS82
6		5	0	CREE OSQ-AABZ LED AREA, ADJUSTABLE MOUNT ARM BRONZE
7		1	0	BETA BRACKET WM4 ELBOW FLOOD/AREA
8		2	0	CREE PT2(180)BZ BRACKET
9		2	0	0
10		7	0	TORK 2007B 105-305v 1000w 4A LED LOCKING CAP RPTCL 3PRONG
			TOTAL	

REMARKS

NOTE: IF ALTERNATE ITEM OR SUBSTITUTION IS NOT ACCEPTABLE, PLEASE INDICATE ON REQUISITION AND INDICATE REASON

Prepared: 12/3/2019

Exhibit 2-10

Burrillville Housing Authority - Ashton Court
77 Ashton Court
Harrisville RI 02830
William Valentino
(401) 568-6200

RISE ENGINEERING

Room Name	Fixture Type	Existing Fixture	AUDITED QTY Existing	Proposed Fixture	AUDITED QTY PROPOSED	COMMENTS
Pole Top Lamps	H1	100W HPS MOGUL	44	40HIDWP/850/277V/EX39	44	
Dumpster Lights	H2	100W MH PARKING LOT SLIP FIT	4	CRE-62W-T3M0000RIS82	4	
Parking Lot G-Side	H3	100W MH PARKING LOT TRUNION MOUNT	1	CRE-62W-T3M0000RIS82	1	
Flag & Sign	H4	60W HALOGEN SCREW IN	4	SYL LED16PAR38/DIM/827/FL40 78436	4	
Parking Lot Front	H5	100W MH PARKING LOT SLIP FIT	2	CRE-62W-T3M0000RIS82	2	

Prepared: 12/3/2019

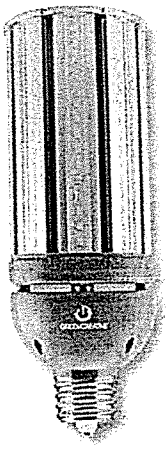
Exhibit 2-10

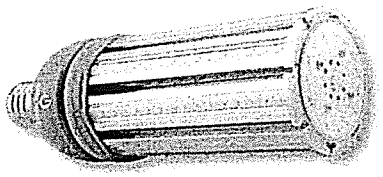
HID LED 45W TITANIUM LED SERIES

Exhibit 8-10

GREENCREATIVE

PRO





45W REPLACES

100-175W HID

70% Energy Savings

$289 Savings per lamp*

- Direct line voltage 120-277V - Not compatible with ballasts
- Designed for use in post top applications
- Compatible with EX39 & E39 sockets
- Fully omnidirectional 320° beam angle
- Available in 3000K, 4000K & 5000K CCT
- Suitable for use in totally enclosed fixtures

50,000 H

120-277V UNIVERSAL

OMNI DIRECTIONAL

5 YR WARRANTY

80 CRI (Ra)

ENCLOSED**

CLASSIFIED C UL US FC LM 79 LM 80 TM 21 IES

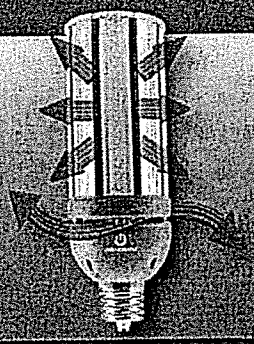
HID LED PRODUCT FEATURES

Suitable for Enclosed Fixtures

This HID LED lamp replaces a 100-175W HID and is suitable for use in totally enclosed fixtures. Its high lumen output and exceptional efficacy make it an ideal choice for outdoor post top applications.

CoolSink Technology

The CoolSink passive cooling system allows air to flow freely through the lamp. This unique design uses an increased cooling surface area to reduce the operating temperature of the LED and power supply, thus resulting in longer lamp life and lumen maintenance.

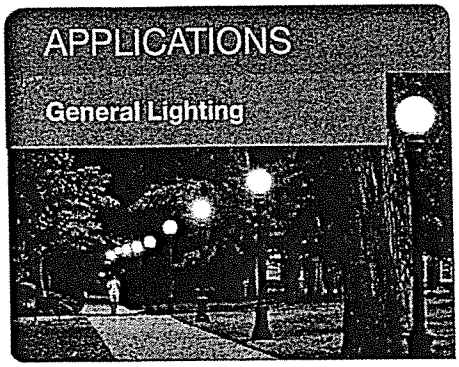


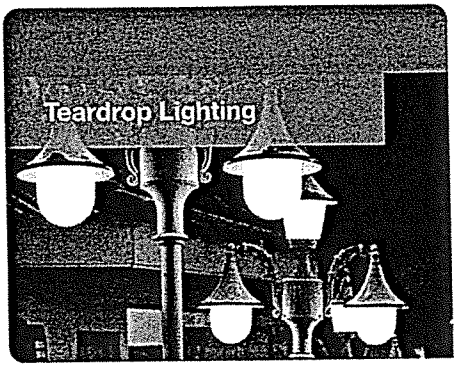
HID LED 45W TITANIUM LED SERIES

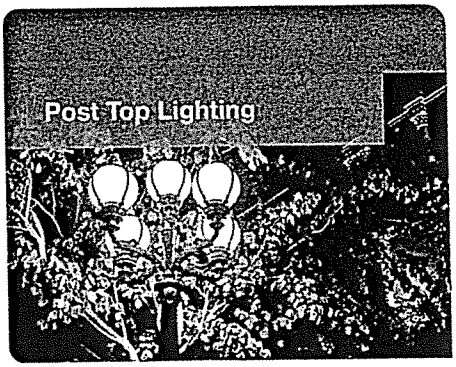
Exhibit 2-10

GREENCREATIVE

APPLICATIONS







SPECIFICATIONS

Product	57838	57839	57840
Model	45HID/830/277/EX39/F	45HID/840/277/EX39/F	45HID/850/277/EX39/F
Type	HID LED	HID LED	HID LED
Base	EX39 (Compatible with E39)	EX39 (Compatible with E39)	EX39 (Compatible with E39)
Power (W)	45	45	45
Voltage - Frequency	100-277V	100-277V	100-277V
Color Temp. (ANSI)	Warm White 3000K	Cool White 4000K	Daylight 5000K
CRI (Ra) (typ.)	80	80	80
Bare Lamp lumens (lm)	5040	5350	5400
Bare Lamp efficacy (LPW)	112	119	120
Fixture lumens (lm)***	3000	3000	3000
Fixture efficacy (LPW)***	67	67	67
Beam Angle	320°	320°	320°
Dimmable	No	No	No
Power Factor	0.9	0.9	0.9
Rated Lifetime - L70 (hrs.)	50,000	50,000	50,000
Temperature Rating	-4°F/-20°C - 95°F/35°C	-4°F/-20°C - 95°F/35°C	-4°F/-20°C - 95°F/35°C
Dia. x MOL	3.66"x10.67"(93x271mm)	3.66"x10.67"(93x271mm)	3.66"x10.67"(93x271mm)
Weight (lb. / g)	2.2lbs / 1033g	2.2lbs / 1033g	2.2lbs / 1033g

HID EQUIVALENCE

GREEN CREATIVE HID LED		Metal Halide		Mercury Vapor		High Pressure Sodium	
Power	Lumens	Power	Mean Lumens	Power	Mean Lumens	Power	Mean Lumens
45W	5400	100W	5800	175W	6250	70W	5350

* Savings per fixture based on $0.11 / kw energy cost, 12 hrs / $12 HID with 10,000-hr lifetime, $70 ballast, $90 LED HID with 50,000 hr lifetime
** Suitable for use in totally enclosed fixtures
*** Fixture lumens and efficacy based on GE Patriarch Luminaire.
**** Suitable for damp locations. Not for use where directly exposed to weather or water.
***** Suitable for use in horizontal applications

Exhibit 2-10

RISE ENGINEERING

Division of Thielsch Engineering, Inc
1341 Elmwood Avenue
Cranston, Rhode Island 02910

Jessie Smith Library
100 Tinkham Lane
Harrisville RI 02830
Beth Ullucci

Project #: RIS-88-19-0204
NGRID Electri 0
NGRID Gas Ar 0

Furnished and installed energy efficient equipment pursuant to dated 2/5/2019.

Ship To: Jessie Smith Library
100 Tinkham Lane
Harrisville
Beth Ullucci
4017107800

	ECM				TOTAL COST

UTILITY VERSION Customer Invoice:

ECM: Lighting & Sensors

LIGHTING & CONTROLS TOTALS - SEE INVENTORY SPREADSHEET		
Materials		**$ 19,569.22**
Labor		**$ 12,141.08**
Misc Costs (lifts, recycling, permits, brackets, etc.)		**$ 5,653.70**
Tax		**$ -**
GRAND TOTAL		**$ 37,364.00**
PUD Electric Incentive	0	$ (9,391.00)
Program Net Invoice Total		**$ 27,973.00**

Prepared: 12/3/2019

RISE ENGINEERING

Facility Name: Jessie Smith Library
Facility Address: 100 Tinkham Lane
City, State, Zip: Harrisville RI 02830
Contact: Beth Ullucci

ECM: Lighting & Sensors

LOCATION					EXISTING CONDITIONS							PROPOSED CONDITIONS							ENERGY SAVINGS	
Line Item	Building	Floor	Room Name	Fixture Type	Existing Device Code	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Device Code	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	kW Saved	kWh Saved
1	MAIN	SECOND	CHILDREN'S BOOKS	A1	2F54HSE	2F54T5HO 8' on A/C	16	2700	117	1.87	5,054	1L042	RL/RB with 2 T5HO LED TUBES	16	2700	42	0.67	1,814	1.20	3,240
2	MAIN	SECOND	CHILDREN'S BOOKS	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	4	2700	48	0.19	516	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	4	2700	26	0.10	281	0.09	238
3	MAIN	SECOND	CHILDREN'S BOOKS	I2	1T0072	71W HALOGEN MR16 2PIN	6	500	72	0.43	216	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	6	500	7	0.04	21	0.39	195
4	MAIN	SECOND	ELEVATOR LOBBY	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	2	2700	48	0.10	259	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	2	2700	26	0.05	140	0.04	119
5	MAIN	SECOND	ELEVATOR ROOM	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	1	2700	72	0.07	194	1L025	RL/RB with 2 T8 12.5w U/1 5/8" LED LAMPS PRISM RECESSED	1	2700	25	0.03	68	0.05	127
6	MAIN	SECOND	UTILITY ROOM	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	2	2700	72	0.14	389	1L025	RL/RB with 2 T8 12.5w U/1 5/8" LED LAMPS PRISM RECESSED	2	2700	25	0.05	135	0.09	254
7	MAIN	SECOND	STORAGE ROOM WITH ROOF ACCESS	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	5	2700	72	0.36	972	1L025	RL/RB with 2 T8 12.5w U/1 5/8" LED LAMPS PRISM RECESSED	5	2700	25	0.13	338	0.24	635
8	MAIN	SECOND	CHILDREN'S LIBRARIAN	C1	2F32SSE	2F32T8 2X4 18 CELL	2	2700	60	0.12	324	1L028	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	2	2700	28	0.06	151	0.06	173
9	MAIN	SECOND	CHILDREN'S LIBRARIAN	C2	1F32SSE	1F32T8 2X4 18 CELL	2	2700	30	0.06	162	1L014	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	2	2700	14	0.03	76	0.03	86
10	MAIN	SECOND	CHILDREN'S SUPPLY ROOM	C1	2F32SSE	2F32T8 2X4 18 CELL	10	2700	60	0.60	1,620	1L028	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	10	2700	28	0.28	756	0.32	864
11	MAIN	SECOND	CHILDREN'S SUPPLY ROOM	C2	1F32SSE	1F32T8 2X4 18 CELL	10	2700	30	0.30	810	1L014	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	10	2700	14	0.14	378	0.16	432
12	MAIN	SECOND	CHILDREN'S SUPPLY ROOM (OVER SINK)	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	1	2700	48	0.05	130	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	1	2700	26	0.03	70	0.02	59
13	MAIN	SECOND	CUSTODIAL ROOM	B2	2F32SSE	2F32T8 4' WRAP	1	1500	60	0.06	90	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	1	1500	28	0.03	42	0.03	48
14	MAIN	SECOND	MARY LEDDY ROOM @ 20'	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	16	2700	48	0.77	2,074	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	16	2700	26	0.42	1,123	0.35	950
15	MAIN	SECOND	MARY LEDDY ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	7	500	72	0.50	252	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	7	500	7	0.05	25	0.46	228
16	MAIN	SECOND	RECEPTION / COMPUTER AREA	A1	2F54HSE	2F54T5HO 8' on A/C	14	2700	117	1.64	4,423	1L042	RL/RB with 2 T5HO LED TUBES	14	2700	42	0.59	1,588	1.05	2,835
17	MAIN	SECOND	RECEPTION / COMPUTER AREA	B1	1F54HSE	1F54T5HO 4' on A/C	10	2700	59	0.59	1,593	1L021	RL/RB with 1 T5HO LED TUBES	10	2700	21	0.21	567	0.38	1,026
18	MAIN	SECOND	RECEPTION / COMPUTER AREA	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	16	2700	48	0.77	2,074	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	16	2700	26	0.42	1,123	0.35	950
19	MAIN	SECOND	RECEPTION / COMPUTER AREA (IN PAPER LAMPS)	I3	1C0009S	9W CFL SCREW IN	6	2700	11	0.07	178	1L008	NL 8W LED A19 SCREW IN	6	2700	8	0.05	130	0.02	49
20	MAIN	SECOND	RECEPTION / COMPUTER AREA	I2	1T0072	71W HALOGEN MR16 2PIN	6	500	72	0.43	216	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	6	500	7	0.04	21	0.39	195
21	MAIN	SECOND	BOYS ROOM / GIRLS ROOM	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	6	2700	48	0.29	778	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	6	2700	26	0.16	421	0.13	356
22	MAIN	SECOND	BOYS ROOM / GIRLS ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	2	500	72	0.14	72	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	2	500	7	0.01	7	0.13	65
23	MAIN	SECOND	BOYS ROOM	B2	2F32SSE	2F32T8 4' WRAP	8	2700	60	0.48	1,296	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	8	2700	28	0.22	605	0.26	691
24	MAIN	SECOND	STAIRWAY 6 @ 20' ABOVE STAIRS	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	8	2700	48	0.38	1,037	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	8	2700	26	0.21	562	0.18	475
25	MAIN	SECOND	STAIRWAY	I2	1T0072	71W HALOGEN MR16 2PIN	2	500	72	0.14	72	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	2	500	7	0.01	7	0.13	65
26	MAIN	FIRST	ELEVATOR LOBBY	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	2	2700	48	0.10	259	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	2	2700	26	0.05	140	0.04	119
27	MAIN	FIRST	ELEVATOR ROOM	B2	2F32SSE	2F32T8 4' WRAP	2	2700	60	0.12	324	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	2	2700	28	0.06	151	0.06	173
28	MAIN	FIRST	FRONT DESK	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	11	2700	48	0.53	1,426	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	11	2700	26	0.29	772	0.24	653
29	MAIN	FIRST	BROWN 2x2 CEILING	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	16	2700	48	0.77	2,074	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	16	2700	26	0.42	1,123	0.35	950
30	MAIN	FIRST	BROWN 2x2 CEILING	I2	1T0072	71W HALOGEN MR16 2PIN	3	500	72	0.22	108	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	3	500	7	0.02	11	0.20	98
31	MAIN	FIRST	REFERENCE AREA	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	10	2700	48	0.48	1,296	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	10	2700	26	0.26	702	0.22	594
32	MAIN	FIRST	READING AREA BY WINDOWS	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	8	2700	48	0.38	1,037	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	8	2700	26	0.21	562	0.18	475
33	MAIN	FIRST	READING AREA BY WINDOWS	I2	1T0072	71W HALOGEN MR16 2PIN	2	500	72	0.14	72	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	2	500	7	0.01	7	0.13	65
34	MAIN	FIRST	SHORT STACKS - DIRECT/INDIRECT	A1	2F54HSE	2F54T5HO 8' on A/C	20	2700	117	2.34	6,318	1L042	RL/RB with 2 T5HO LED TUBES	20	2700	42	0.84	2,268	1.50	4,050
35	MAIN	FIRST	SHORT STACKS - DIRECT/INDIRECT	B1	1F54HSE	1F54T5HO 4' on A/C	3	2700	59	0.18	478	1L021	RL/RB with 1 T5HO LED TUBES	3	2700	21	0.06	170	0.11	308
36	MAIN	FIRST	BUSINESS CENTER	A1	2F54HSE	2F54T5HO 8' on A/C	2	2700	117	0.23	632	1L042	RL/RB with 2 T5HO LED TUBES	2	2700	42	0.08	227	0.15	405
37	MAIN	FIRST	BUSINESS CENTER	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	6	2700	48	0.29	778	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	6	2700	26	0.16	421	0.13	356
38	MAIN	FIRST	BUSINESS CENTER	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
39	MAIN	FIRST	TALL STACKS - RIBBED LENS	A1	2F54HSE	2F54T5HO 8' on A/C	48	2700	117	5.62	15,163	1L042	RL/RB with 2 T5HO LED TUBES	48	2700	42	2.02	5,443	3.60	9,720
40	MAIN	FIRST	TALL STACKS - UPLIGHTS ON BEAMS @ 20'	I5	2C0026E	2/26W CFL	48	2700	54	2.59	6,998	2C00135	NL (2)13W LED 4 PIN - HORIZONTAL MOUNT	48	2700	30	1.44	3,888	1.15	3,110

Exhibit 2-10

RISE ENGINEERING

Facility Name: Jessie Smith Library
Facility Address: 100 Tinkham Lane
City, State, Zip: Harrisville RI 02830
Contact: Beth Ullucci

ECM: Lighting & Sensors

LOCATION					EXISTING CONDITIONS						PROPOSED CONDITIONS						ENERGY SAVINGS	
Line Item	Building	Floor	Room Name	Fixture Type	Existing Device Code	Existing Fixture Type	Fixt Qty	Existing Hours	Watts	kW	kWh	Proposed Device Code	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	kW Saved	kWh Saved
41	MAIN	FIRST	TALL STACKS ON BEAMS @ 20'	I2	1T0072	71W HALOGEN MR16 2PIN	4	500	72	0.29	144	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	4	500	7	0.03	14	0.26	130
42	MAIN	FIRST	CONFERENCE ROOM	A1	2F54HSE	2F54T5HO 8' on A/C	3	2700	117	0.35	948	1L042	RL/RB with 2 T5HO LED TUBES	3	2700	42	0.13	340	0.23	608
43	MAIN	FIRST	CONFERENCE ROOM	B1	1F54HSE	1F54T5HO 4' on A/C	3	2700	59	0.18	478	1L021	RL/RB with 1 T5HO LED TUBES	3	2700	21	0.06	170	0.11	308
44	MAIN	FIRST	CONFERENCE ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
45	MAIN	FIRST	LOCAL HISTORY	A1	2F54HSE	2F54T5HO 8' on A/C	3	2700	117	0.35	948	1L042	RL/RB with 2 T5HO LED TUBES	3	2700	42	0.13	340	0.23	608
46	MAIN	FIRST	LOCAL HISTORY	B1	1F54HSE	1F54T5HO 4' on A/C	3	2700	59	0.18	478	1L021	RL/RB with 1 T5HO LED TUBES	3	2700	21	0.06	170	0.11	308
47	MAIN	FIRST	LOCAL HISTORY	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
48	MAIN	FIRST	REFERENCE AREA LIBRARIAN	C1	2F32SSE	2F32T8 2X4 18 CELL	2	2700	60	0.12	324	1L028	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	2	2700	28	0.06	151	0.06	173
49	MAIN	FIRST	REFERENCE AREA LIBRARIAN	C2	1F32SSE	1F32T8 2X4 18 CELL	2	2700	30	0.06	162	1L014	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	2	2700	14	0.03	76	0.03	86
50	MAIN	FIRST	REFERENCE WORKSHOP	A1	2F54HSE	2F54T5HO 8' on A/C	2	2700	117	0.23	632	1L042	RL/RB with 2 T5HO LED TUBES	2	2700	42	0.08	227	0.15	405
51	MAIN	FIRST	REFERENCE WORKSHOP	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	5	2700	48	0.24	648	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	5	2700	26	0.13	351	0.11	297
52	MAIN	FIRST	REFERENCE WORKSHOP	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
53	MAIN	FIRST	REFERENCE WORKSHOP	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	4	2700	72	0.29	778	1L025	RL/RB with 2 T8 12.5w U/I 5/8" LED LAMPS PRISM RECESSED	4	2700	25	0.10	270	0.19	508
54	MAIN	FIRST	STUDY ROOMS (3)	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	3	2700	48	0.14	389	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	3	2700	26	0.08	211	0.07	178
55	MAIN	FIRST	STUDY ROOMS (2)	B1	1F54HSE	1F54T5HO 4' on A/C	2	2700	59	0.12	319	1L021	RL/RB with 1 T5HO LED TUBES	2	2700	21	0.04	113	0.08	205
56	MAIN	FIRST	HALL - OUTSIDE STUDY ROOMS	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	1	2700	48	0.05	130	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	1	2700	26	0.03	70	0.02	59
57	MAIN	FIRST	HALL - OUTSIDE STUDY ROOMS	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
58	MAIN	FIRST	STORAGE	B2	2F32SSE	2F32T8 4' WRAP	6	2700	60	0.36	972	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	6	2700	28	0.17	454	0.19	518
59	MAIN	FIRST	BOOK DROP	B2	2F32SSE	2F32T8 4' WRAP	1	2700	60	0.06	162	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	1	2700	28	0.03	76	0.03	86
60	MAIN	FIRST	CIRCULATION OFFICE - A/B SWITCHING	C1	2F32SSE	2F32T8 2X4 18 CELL	3	2700	60	0.18	486	1L028	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	3	2700	28	0.08	227	0.10	259
61	MAIN	FIRST	CIRCULATION OFFICE - A/B SWITCHING	C2	1F32SSE	1F32T8 2X4 18 CELL	3	2700	30	0.09	243	1L014	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	3	2700	14	0.04	113	0.05	130
62	MAIN	FIRST	TECH SERVICE	A1	2F54HSE	2F54T5HO 8' on A/C	1	2700	117	0.12	316	1L042	RL/RB with 2 T5HO LED TUBES	1	2700	42	0.04	113	0.08	203
63	MAIN	FIRST	TECH SERVICE	B1	1F54HSE	1F54T5HO 4' on A/C	1	2700	59	0.06	159	1L021	RL/RB with 1 T5HO LED TUBES	1	2700	21	0.02	57	0.04	103
64	MAIN	FIRST	TECH SERVICE	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	6	2700	48	0.29	778	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	6	2700	26	0.16	421	0.13	356
65	MAIN	FIRST	CIRCULATION WORK ROOM	A1	2F54HSE	2F54T5HO 8' on A/C	1	2700	117	0.12	316	1L042	RL/RB with 2 T5HO LED TUBES	1	2700	42	0.04	113	0.08	203
66	MAIN	FIRST	CIRCULATION WORK ROOM	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	4	2700	48	0.19	518	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	4	2700	26	0.10	281	0.09	238
67	MAIN	FIRST	CIRCULATION WORK ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
68	MAIN	FIRST	CIRCULATION WORK ROOM	C1	2F32SSE	2F32T8 2X4 18 CELL	1	2700	60	0.06	162	1L028	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	1	2700	28	0.03	76	0.03	86
69	MAIN	FIRST	CIRCULATION WORK ROOM	C2	1F32SSE	1F32T8 2X4 18 CELL	1	2700	30	0.03	81	1L014	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	1	2700	14	0.01	38	0.02	43
70	MAIN	FIRST	DATA ROOM	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	2	1000	72	0.14	144	1L025	RL/RB with 2 T8 12.5w U/I 5/8" LED LAMPS PRISM RECESSED	2	1000	25	0.05	50	0.09	94
71	MAIN	FIRST	ADMINISTRATION ASSISTANT	C1	2F32SSE	2F32T8 2X4 18 CELL	2	2700	60	0.12	324	1L028	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	2	2700	28	0.06	151	0.06	173
72	MAIN	FIRST	ADMINISTRATION ASSISTANT	C2	1F32SSE	1F32T8 2X4 18 CELL	2	2700	30	0.06	162	1L014	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	2	2700	14	0.03	76	0.03	86
73	MAIN	FIRST	ADMINISTRATION ASSISTANT	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
74	MAIN	FIRST	LIBRARY DIRECTOR	A1	2F54HSE	2F54T5HO 8' on A/C	1	2700	117	0.12	316	1L042	RL/RB with 2 T5HO LED TUBES	1	2700	42	0.04	113	0.08	203
75	MAIN	FIRST	LIBRARY DIRECTOR	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	4	2700	72	0.29	778	1L025	RL/RB with 2 T8 12.5w U/I 5/8" LED LAMPS PRISM RECESSED	4	2700	25	0.10	270	0.19	508
76	MAIN	FIRST	REST ROOM	B2	2F32SSE	2F32T8 4' WRAP	1	2700	60	0.06	162	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	1	2700	28	0.03	76	0.03	86
77	MAIN	FIRST	REST ROOM	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	1	2700	48	0.05	130	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	1	2700	26	0.03	70	0.02	59
78	MAIN	FIRST	REST ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
79	MAIN	FIRST	RECEIVING & STORAGE	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	4	2700	72	0.29	778	1L025	RL/RB with 2 T8 12.5w U/I 5/8" LED LAMPS PRISM RECESSED	4	2700	25	0.10	270	0.19	508
80	MAIN	FIRST	RECEIVING & STORAGE	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33

Prepared: 6/26/2019

Exhibit 2-10

RISE ENGINEERING

Facility Name: Jessie Smith Library
Facility Address: 100 Tinkham Lane
City, State, Zip: Harrisville RI 02830
Contact: Beth Ulivcci

ECM: Lighting & Sensors

LOCATION					EXISTING CONDITIONS							PROPOSED CONDITIONS							ENERGY SAVINGS	
Line Item	Building	Floor	Room Name	Fixture Type	Existing Device Code	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Device Code	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	kW Saved	kWh Saved
81	MAIN	FIRST	STAFF LOUNGE	A1	2F54HSE	2F54T5HO 8' on A/C	1	2700	117	0.12	316	1L042	RL/RB with 2 T5HO LED TUBES	1	2700	42	0.04	113	0.08	203
82	MAIN	FIRST	STAFF LOUNGE	B1	1F54HSE	1F54T5HO 4' on A/C	1	2700	59	0.06	159	1L021	RL/RB with 1 T5HO LED TUBES	1	2700	21	0.02	57	0.04	103
83	MAIN	FIRST	STAFF LOUNGE	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	6	2700	48	0.29	778	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	6	2700	26	0.16	421	0.13	356
84	MAIN	FIRST	STAFF LOUNGE	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
85	MAIN	FIRST	ADMINISTRATION HALLWAY	D1	2F32SSE	2F32T8 2X2 U/6" 9 CELL	6	2700	60	0.36	972	1L026	RL/RB with 2 T8 13w U/6" LED LAMPS 2X2 RECESSED	6	2700	26	0.16	421	0.20	551
86	MAIN	FIRST	BOILER ROOM	B2	2F32SSE	2F32T8 4' WRAP	6	2700	60	0.36	972	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	6	2700	28	0.17	454	0.19	518
87	MAIN	FIRST	SPRINKLER ROOM	B2	2F32SSE	2F32T8 4' WRAP	1	2700	60	0.06	162	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	1	2700	28	0.03	76	0.03	86
88	MAIN	FIRST	MAIN LOBBY	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	7	2700	48	0.34	907	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	7	2700	26	0.18	491	0.15	416
89	MAIN	FIRST	MAIN LOBBY	I2	1T0072	71W HALOGEN MR16 2PIN	6	500	72	0.43	216	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	6	500	7	0.04	21	0.39	195
90	MAIN	FIRST	FOYER	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	2	2700	48	0.10	259	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	2	2700	26	0.05	140	0.04	119
91	MAIN	FIRST	FOYER	I2	1T0072	71W HALOGEN MR16 2PIN	1	500	72	0.07	36	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	500	7	0.01	4	0.07	33
92	MAIN	FIRST	STILLWATER ROOM	I3	1C0009S	9W CFL SCREW IN	2	2700	11	0.02	59	1L008	NL 8W LED A19 SCREW IN	2	2700	8	0.02	43	0.01	16
93	MAIN	FIRST	STILLWATER ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	1	1000	72	0.07	72	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	1000	7	0.01	7	0.07	65
94	MAIN	FIRST	GLASS CASE (2) IN LOBBY	I2	1T0072	71W HALOGEN MR16 2PIN	4	2700	72	0.29	778	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	4	2700	7	0.03	76	0.26	702
95	MAIN	FIRST	HALLWAY	I5	2C0026E	2/26W CFL	7	2700	54	0.38	1,021	2C0013S	NL (2)13W LED 4 PIN - HORIZONTAL MOUNT	7	2700	30	0.21	567	0.17	454
96	MAIN	FIRST	HALLWAY	I2	1T0072	71W HALOGEN MR16 2PIN	26	2700	72	1.87	5,054	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	26	2700	7	0.18	491	1.69	4,563
97	MAIN	FIRST	HALLWAY	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	2	2700	48	0.10	259	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	2	2700	26	0.05	140	0.04	119
98	MAIN	FIRST	MEETING ROOM	I5	2C0026E	2/26W CFL	13	2700	54	0.70	1,895	2C0013S	NL (2)13W LED 4 PIN - HORIZONTAL MOUNT	13	2700	30	0.39	1,053	0.31	842
99	MAIN	FIRST	MEETING ROOM	I4	1C0042E	42W CFL 4PIN	9	2700	48	0.43	1,166	1L026	NL 26W LED 4 PIN - HORIZONTAL MOUNT	9	2700	26	0.23	632	0.20	535
100	MAIN	FIRST	MEETING ROOM	B2	2F32SSE	2F32T8 4' WRAP	4	1000	60	0.24	240	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	4	1000	28	0.11	112	0.13	128
101	MAIN	FIRST	KITCHEN	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	2	1500	72	0.14	216	1L025	RL/RB with 2 T8 12.5w U/1 5/8" LED LAMPS PRISM RECESSED	2	1500	25	0.05	75	0.09	141
102	MAIN	FIRST	STAIRWAY	D2	2F40BXE	2F31T8/SPX/U 1 5/8" PRISM	2	1500	72	0.14	216	1L025	RL/RB with 2 T8 12.5w U/1 5/8" LED LAMPS PRISM RECESSED	2	1500	25	0.05	75	0.09	141
103	MAIN	FIRST	STAIRWAY	A1	2F54HSE	2F54T5HO 8' on A/C	1	1500	117	0.12	176	1L042	RL/RB with 2 T5HO LED TUBES	1	1500	42	0.04	63	0.08	113
104	MAIN	FIRST	MEN'S ROOM	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	3	2700	48	0.14	389	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	3	2700	26	0.08	211	0.07	178
105	MAIN	FIRST	MEN'S ROOM	B2	2F32SSE	2F32T8 4' WRAP	4	2700	60	0.24	648	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	4	2700	28	0.11	302	0.13	346
106	MAIN	FIRST	MEN'S ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	2	500	72	0.14	72	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	2	500	7	0.01	7	0.13	65
107	MAIN	FIRST	WOMEN'S ROOM	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	3	2700	48	0.14	389	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	3	2700	26	0.08	211	0.07	178
108	MAIN	FIRST	WOMEN'S ROOM	B2	2F32SSE	2F32T8 4' WRAP	4	2700	60	0.24	648	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	4	2700	28	0.11	302	0.13	346
109	MAIN	FIRST	WOMEN'S ROOM	I2	1T0072	71W HALOGEN MR16 2PIN	2	500	72	0.14	72	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	2	500	7	0.01	7	0.13	65
110	MAIN	FIRST	CUSTODIAL ROOM	B2	2F32SSE	2F32T8 4' WRAP	1	2700	60	0.06	162	1L028	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	1	2700	28	0.03	76	0.03	86
111	MAIN	EXTERIOR	ENTRÉE WAY SOFFITS 8 @ 20'	I4	1C0042E	42W CFL 4PIN	13	4380	48	0.62	2,733	1L026	NL 26W LED 4 PIN - HORIZONTAL MOUNT	13	4380	26	0.34	1,480	0.29	1,253
112	MAIN	EXTERIOR	ENTRÉE WAY	I1	1C0042E	42W CFL 4PIN VERTICAL MOUNT	5	4380	48	0.24	1,051	1L026	NL 26W LED 4 PIN VERTICAL MOUNT	5	4380	26	0.13	569	0.11	482
113	MAIN	EXTERIOR	ENTRÉE WAY	I2	1T0072	71W HALOGEN MR16 2PIN	1	4380	72	0.07	315	1L007	NL 7W LED MR16 GU 5.3 BASE 4000K	1	4380	7	0.01	31	0.07	285
114	MAIN	EXTERIOR	EXTERIOR ROUND	I7	2C0018E	2/18W CFL ROUND WALL MOUNT	6	4380	40	0.24	1,051	1L013	KIT 13W LED DRUM FIXTURE	6	4380	13	0.08	342	0.16	710
115	MAIN	EXTERIOR	EXTERIOR IN GROUND	I8	1M0070S	70W METAL HALIDE INGROUND	6	4380	95	0.57	2,497	1L026	NL 26W LED SCREW IN	6	4380	26	0.16	683	0.41	1,813
116	MAIN	EXTERIOR	EXTERIOR GOOSE NECK	I9	1M0250S	250W METAL HALIDE GOOSE NECK	8	4380	295	2.36	10,337	1L037	NL 37W LED SCREW IN	8	4380	37	0.30	1,296	2.06	9,040
			TOTALS				604			42.45	111,779			604			15.77	42,985	26.68	68,814

Exhibit 2-10

Prepared: 6/26/2019

THIELSCH ENGINEERING, INC.

(FOR INSTALLER ONLY)

LABOR ORDER

Date: 4/22/2019

Lab No. RIS-88-19-0204

RISE PM Name: 0

Dept.: 88

Jessie Smith Library
100 Tinkham Lane
Harrisville RI 02830
Beth Ullucci (401) 710-7800

P.O. #

Suggested Contractor ENTER ON PI TAB

	FIXT TYPE	INSTALLED QUANTITY	DESCRIPTION	PART NO
1	A1	113	RL/RB with 2 T5HO LED TUBES	BALLAST SYL QTP - 2X54T5HO/UNV-PSN-HTW-NL-BA
2	B1	23	RL/RB with 1 T5HO LED TUBES	BALLAST SYL QTP - 2X54T5HO/UNV-PSN-HTW-NL-BA
3	B2	39	RL/RB with 2 T8 14w 4' LED TUBES 1x4 WRAP	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC
4	C1	20	RL/RB with 2 T8 14w 4' LED LAMPS 2x4 RECESSED	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC
5	C2	20	RL/RB with 1 T8 14w 4' LED LAMPS 2x4 RECESSED	BALLAST 1L4FTT8 SSLP - UNV SYL QHE 1X32T8/UNV ISL
6	D1	6	RL/RB with 2 T8 13w U/6" LED LAMPS 2X2 RECESSED	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC
7	D2	26	RL/RB with 2 T8 12.5w U/1 5/8" LED LAMPS PRISM RECESSED	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC
8	I1	154	NL 26W LED 4 PIN VERTICAL MOUNT	9.5PLV/840/DIR
9	I2	30	NL 7W LED MR16 GU 5.3 BASE 4000K	6MR16DIM/840FL35
10	I3	8	NL 8W LED A19 SCREW IN	8A19DIM/840
11	I4	22	NL 26W LED 4 PIN - HORIZONTAL MOUNT	8.5PLH/840/DIR
12	I5	136	NL (2)13W LED 4 PIN - HORIZONTAL MOUNT	8.5PLH/840/DIR
13	I6	0	NL (2)13W LED 4 PIN - HORIZONTAL MOUNT	8.5PLH/840/DIR
14	I7	6	KIT 13W LED DRUM FIXTURE	REMPHOS RPT-LEDCR-900LM-4000K 7W DRUM KIT
15	I8	6	NL 26W LED SCREW IN	25HID/840/277V/E26
16	I9	8	NL 37W LED SCREW IN	37HID/840/277V/E26
17				0

REMARKS

NOTE: IF ALTERNATE ITEM OR SUBSTITUTION IS NOT ACCEPTABLE, PLEASE INDICATE ON REQUISITION AND INDICATE REASON

Prepared: 12/3/2019

Exhibit 2-10

Exhibit 2-10

RISE ENGINEERING

Division of Thielsch Engineering, Inc
1341 Elmwood Avenue
Cranston, Rhode Island 02910

Invoice #
ENTER TODAY'S DATE
Page Number 1
Net 30

Ashton Court
77 Ashton Court
Harrisville RI 0
Bill Valentine

Project #: RIS-

Furnished and installed energy efficient equipment pursuant to contract dated TBD.

Ship To: Ashton Court
77 Ashton Court
Harrisville
Bill Valentine
4015686200

	ECM				TOTAL COST
UTILITY VERSION Customer Invoice:					
	ECM: Lighting & Sensors				
	LIGHTING & CONTROLS TOTALS				
	Materials				**$ 34,848.94**
	Labor				**$ 21,265.40**
	Misc Costs (lifts, recycling, permits, brackets, etc.)				**$ 2,866.50**
	Tax				**$ -**
	GRAND TOTAL				**$ 58,980.84**
	PUD Electric Incentive		0		$ (22,764.19)
	Program Net Invoice Total				**$ 36,216.65**

Prepared: 12/4/2019

RISE ENGINEERING

Facility Name: Ashton Court
Facility Address: Main St
City, State, Zip: Harrisville RI 0
Contact: Bill Valintine

ECM: Lighting & Sensors

LOCATION				EXISTING CONDITIONS							PROPOSED CONDITIONS						ENERGY SAVINGS	
Line Item	Building	Room Name	Fixture Type	Existing Device Code	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Device Code	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	kW Saved	kWh Saved
1	A	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	16	3000	37	0.59	1,776	1L014	RL/RB WITH 2/7W LAMPS	16	3000	14	0.22	672	0.37	1,104
2	A	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	16	1000	250	4.00	4,000	1L013	NF 13W LED DESIGNER DRUM	16	1000	13	0.21	208	3.79	3,792
3	A	Apt Hallway	I2	2C0013S	2/13W CFL DRUM	16	4380	30	0.48	2,102	1L010	KIT WITH 10W LED	16	4380	10	0.16	701	0.32	1,402
4	A	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	16	3000	60	0.96	2,880	1L020	RL/RB WITH 2/10W LAMPS	16	3000	20	0.32	960	0.64	1,920
5	A	Building Hallway	B2	2F32SSE	2F32T8 4' SKINNY WRAP	20	8760	60	1.20	10,512	1L020	RL/RB WITH 2/10W LAMPS	20	8760	20	0.40	3504	0.80	7,008
6	B	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
7	B	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
8	B	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
9	B	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
10	B	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
11	C	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
12	C	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
13	C	apt Hallway	I2	2C0013S	2/13W CFL DRUM	8	4380	30	0.24	1,051	1L010	KIT WITH 10W LED	8	4380	10	0.08	350	0.16	701
14	C	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
15	C	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
16	D	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
17	D	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
18	D	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
19	D	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
20	D	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
21	E	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	16	3000	37	0.59	1,776	1L014	RL/RB WITH 2/7W LAMPS	16	3000	14	0.22	672	0.37	1,104
22	E	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	16	1000	250	4.00	4,000	1L013	NF 13W LED DESIGNER DRUM	16	1000	13	0.21	208	3.79	3,792
23	E	apt Hallway	I2	2C0013S	2/13W CFL DRUM	16	4380	30	0.48	2,102	1L010	KIT WITH 10W LED	16	4380	10	0.16	701	0.32	1,402
24	E	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	16	3000	60	0.96	2,880	1L020	RL/RB WITH 2/10W LAMPS	16	3000	20	0.32	960	0.64	1,920
25	E	Building Hallway	B2	2F32SSE	2F32T8 4' SKINNY WRAP	20	8760	60	1.20	10,512	1L020	RL/RB WITH 2/10W LAMPS	20	8760	20	0.40	3504	0.80	7,008
26	F	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
27	F	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
28	F	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
29	F	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
30	F	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
31	G	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
32	G	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
33	G	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
34	G	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
35	G	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350

Prepared 12/4/2019

Exhibit 2-10

RISE ENGINEERING

Facility Name: Ashton Court
Facility Address: Main St
City, State, Zip: Harrisville RI 0
Contact: Bill Valintine

ECM: Lighting & Sensors

LOCATION				EXISTING CONDITIONS							PROPOSED CONDITIONS						ENERGY SAVINGS	
Line Item	Building	Room Name	Fixture Type	Existing Device Code	Existing Fixture Type	Fixt Qty	Existing Hours	Watts	kW	kWh	Proposed Device Code	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	kW Saved	kWh Saved
36	H	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
37	H	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
38	H	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
39	H	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
40	H	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
41	J	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
42	J	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
43	J	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
44	J	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
45	J	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
46	K	Bathroom	D1	2F17SSE	2F17T8 2' VANITY	4	3000	37	0.15	444	1L014	RL/RB WITH 2/7W LAMPS	4	3000	14	0.06	168	0.09	276
47	K	Bathroom	I1	1T0250	250W HALOGEN HEAT LAMP	4	1000	250	1.00	1,000	1L013	NF 13W LED DESIGNER DRUM	4	1000	13	0.05	52	0.95	948
48	K	apt Hallway	I2	2C0013S	2/13W CFL DRUM	6	4380	30	0.18	788	1L010	KIT WITH 10W LED	6	4380	10	0.06	263	0.12	526
49	K	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	4	3000	60	0.24	720	1L020	RL/RB WITH 2/10W LAMPS	4	3000	20	0.08	240	0.16	480
50	K	Building Hallway	I2	2C0013S	2/13W CFL DRUM	2	8760	30	0.06	526	1L010	KIT WITH 10W LED	2	8760	10	0.02	175	0.04	350
51	Community	Community Room	C1	4F32SSE	4F43T8 2X4 SURFACE	8	3000	112	0.90	2,688	1L040	RL/RB WITH 4/10W LAMPS	8	3000	40	0.32	960	0.58	1,728
52	Community	Laundry	B1	2F32SSE	2F32T8 4' WRAP	3	3000	60	0.18	540	1L020	RL/RB WITH 2/10W LAMPS	3	3000	20	0.06	180	0.12	360
53	Community	Mens	B1	2F32SSE	2F32T8 4' WRAP	2	2000	60	0.12	240	1L020	RL/RB WITH 2/10W LAMPS	2	2000	20	0.04	80	0.08	160
54	Community	Womens	B1	2F32SSE	2F32T8 4' WRAP	2	2000	60	0.12	240	1L020	RL/RB WITH 2/10W LAMPS	2	2000	20	0.04	80	0.08	160
55	Community	Kitchen	B1	2F32SSE	2F32T8 4' WRAP	3	2000	60	0.18	360	1L020	RL/RB WITH 2/10W LAMPS	3	2000	20	0.06	120	0.12	240
56	Community	Office	A1	4F32SSE	4F32T8 4' WRAP	16	2000	112	1.79	3,584	1L040	RL/RB WITH 4/10W LAMPS	16	2000	40	0.64	1280	1.15	2,304
57	Community	Maintenace	I3	1I0080	80W INC SCREW IN	6	3500	80	0.48	1,680	1L010	RL WITH 10W A19 LED LAMP	6	3500	10	0.06	210	0.42	1,470
		TOTALS				370			31.32	79,960			370			6.01	22271	25.31	57,688

Prepared 12/4/2019

Exhibit 2-10

Exhibit 2-10

THIELSCH ENGINEERING, INC.

PURCHASE ORDER

REQUISITION

Date: 12/4/2019
Lab No. RIS-
Sub Account
Name $ -
Dept. 88
Phase: Project: Ashton Court - Interior Lighting 10-28-2018

Deliver To

RISE Warehouse
195 Frances Ave
Cranston, RI 02910
ATTN:
(401) 784-3700

Suggested Vendor

0

P.O. #

	TOTAL QUANTITY NEEDED	ACTUAL DESCRIPTION	SOLOMON DESCRIPTION / PART #	
1	16	RL/RB WITH 4/10W LAMPS	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC	
2	74	RL/RB WITH 2/10W LAMPS	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC	
3	40	RL/RB WITH 2/10W LAMPS	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC	
4	8	RL/RB WITH 4/10W LAMPS	BALLAST, 4L4FT SUPER T8 LP SYL QHE 4X32T8/UNV ISL-SC	
5	64	RL/RB WITH 2/7W LAMPS	BALLAST 2L4FTT8 SSLP - UNV SYL QHE 2X32T8/UNV ISL-SC	
10	64	NF 13W LED DESIGNER DRUM	RPT-LEDCR-1600LM-4000K + 14" DRUM HOUSING	
11	98	KIT WITH 10W LED	REMPHOS RPT-LEDCR-900LM-2700K 7W DRUM KIT	
12	6	RL WITH 10W A19 LED LAMP	PHI 9A19/LED/830/DIM 120v 450957 9A19 30K	
222	QTY	Lamp Descriptions	May enter over QTY needed	
223	128	PHI 7T8/24-3500 IF 10/1	PHI 8.5T8/24-3500 IF 10/1 or 7T8/24-3500	
229	324	PHI 10T8/48-3500 IF 10/1 10W 4ft LED TUBE 3500k	PHI 10T8/48-3500 IF 10/1 10W 4ft LED TUBE 3500k	
				TOTAL

REMARKS

NOTE: IF ALTERNATE ITEM OR SUBSTITUTION IS NOT ACCEPTABLE, PLEASE INDICATE ON REQUISITION AND INDICATE REASON

Exhibit 2-11

RISE ENGINEERING

Division of Thielsch Engineering, Inc
1341 Elmwood Avenue
Cranston, Rhode Island 02910

Invoice #
ENTER TODAY'S DATE
Page Number 1
Net 30

Assembly Theatre - LED Lighting upgrade
144 Harrisville Main St.
Harrisville RI 02830
Steve Rawson, Facility Manager, BOA

Project #: RIS-88-19-0499
PUD Electric A 0
0

Furnished and installed energy efficient equipment pursuant to contract dated 7/9/2019.

Ship To: Assembly Theatre - LED Lighting upgrade
144 Harrisville Main St.
Harrisville
Steve Rawson, Facility Manager, BOA
4014796909

	ECM				TOTAL COST

UTILITY VERSION Customer Invoice:

ECM: Lighting & Sensors

LIGHTING & CONTROLS TOTALS - SEE INVENTORY SPREADSHEET		
Materials		**$ 2,852.13**
Labor		**$ 6,732.87**
Misc Costs (lifts, recycling, permits, brackets, etc.)		**$ 370.00**
GRAND TOTAL		**$ 9,955.00**
PUD Electric Incentive	0	**$ (3,373.00)**
Program Net Invoice Total		**$ 6,582.00**

Prepared: 12/3/2019

Exhibit 2-11

THIELSCH ENGINEERING, INC.

(FOR INSTALLER ONLY)

LABOR ORDER

Date: 10/9/2019
Lab No. RIS-88-19-0499

RISE PM Name: 0
Dept.: 88

Assembly Theatre - LED Lighting upgrade
144 Harrisville Main St.
Harrisville RI 02830
Steve Rawson, Facility Manager, BOA
(401) 479-6909

Suggested Contractor ENTER ON PI TAB

P.O. #

	FIXT TYPE	INSTALLED QUANTITY	DESCRIPTION	PART NO
10	B1	2	4' LED STRIPS	RP-LBI-G1-4F-15W-40K-WC-2X
11		18	NEW WHIPS	
12		18	NEW RECEPTACLES	
13	B2	12	3' LED STRIPS	RP-LBI-G1-3F-10W-40K-WC
14	B3	4	2' LED STRIPS	RP-LBI-G1-2F-6W-40K-WC
			TOTAL	

REMARKS

NOTE: IF ALTERNATE ITEM OR SUBSTITUTION IS NOT ACCEPTABLE, PLEASE INDICATE ON REQUISITION AND INDICATE REASON

ORDERED BY _____

APPROVED BY _____

Prepared: 12/3/2019

Assembly Theatre - LED Lighting upgrade
144 Harrisville Main St.
Harrisville RI 02830
Steve Rawson, Facility Manager, BOA
(401) 479-6909

RISE ENGINEERING

Line Item	Floor	Room Name	Fixture Type	Existing Fixture	AUDITED QTY Existing	Proposed Fixture	AUDITED QTY PROPOSED	INSTALLED FIXTURE QTY	COMMENTS
						RECYCLING 4' LAMP BOXES QTY:			
						RECYCLING 8' LAMP BOXES QTY:			
						RECYCLING STEEL DRUMS QTY:			
						RECYCLING 5 GALLON BUCKETS QTY:			
1	ATTIC	THEATER	B1	100W INC SCREW IN	6	RP-LBI-G1-4F-15W-40K-WC-2X	2		
2	ATTIC	THEATER	B2	100W INC SCREW IN	48	RP-LBI-G1-3F-10W-40K-WC-2X	12		
3	ATTIC	THEATER	B3	100W INC SCREW IN	14	RP-LBI-G1-2F-6W-40K-WC-2X	4		

Prepared: 12/4/2019

Exhibit 2-11

Exhibit 2-11

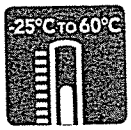
LEDBARKIT-INTERNAL DRIVER (LBI) THE LINEAR TRANSFORMER

WARRANTY

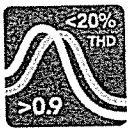
VOLTAGE

DIMMING

EFFICACY (LIGHT ENGINE)



OPERATING TEMP



PWR FACTOR/THD

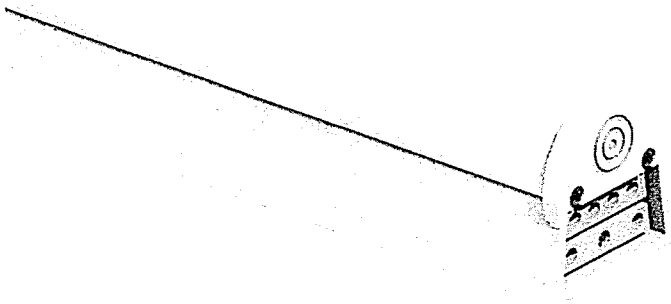
CRI

OPTIONAL EMG BATTERY BACKUP


OPTIONAL MOTION SENSOR

one light – unlimited possibilities

available in both BASE & PRO



	PRO	BASE
DIMMABLE	✓ 0-10V	—
CONTROL POWER	✓ 12V	—
FLEX COLOR	✓	—
FLEX WATT	✓	—
WARRANTY	10YR	5YR
L70	>100,000 HRS	50,000 HRS

DEFAULT CONFIGURATIONS

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-2F-6W-40K-WC	844006023867	2FT PRO INTERNAL DRIVE LIGHT BAR	6/9/12	780-1560	130-135	3500/4000/5000	PFLO5RPC
RP-LBI-G1-3F-10W-40K-WC	844006023959	3FT PRO INTERNAL DRIVE LIGHT BAR	10/12/15	1400-2100	140-145	3500/4000/5000	PTTC4A0W
RP-LBI-G1-4F-15W-40K-WC	844006024079	4FT PRO INTERNAL DRIVE LIGHT BAR	10/15/25	1370-3425	137-150	3500/4000/5000	PCW0MQPB
RP-LBI-G1-4F-15W-40K-B	844006024215	4FT BASE INTERNAL DRIVE LIGHT BAR	15	2325	155	4000	

Default settings are above. See pages 7 and 8 for additional styles, lumen packages, color temperatures and options.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBARKIT-INT

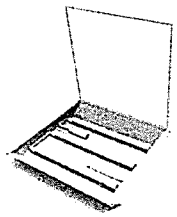
Usage & Applicat

One solution. ETL and DL

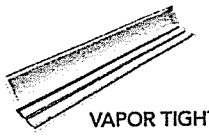
Retrof

Using the fast install magnetic brack
T5, T8 or T12 socketed

TROFFE



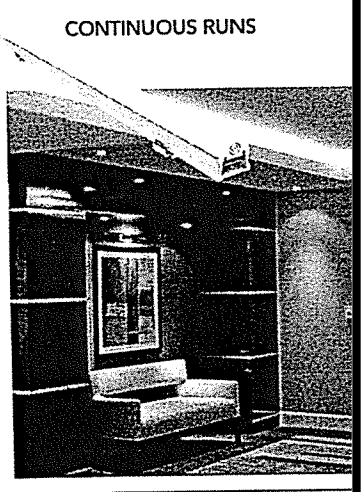
Example 2x2 and 2x4 retro



VAPOR TIGHT

WR

CONTINUOUS RUNS



Coming

RETROFIT MO

Mount light bar to a Retrofit Mount
- contact us

FOR PRODUCT INFO ("LED" MODEL #) CO
FOR PRODUCT INFO ("RP" MODEL #) CON

LEDBarKit-Internal Driver (LBI) Design Guide

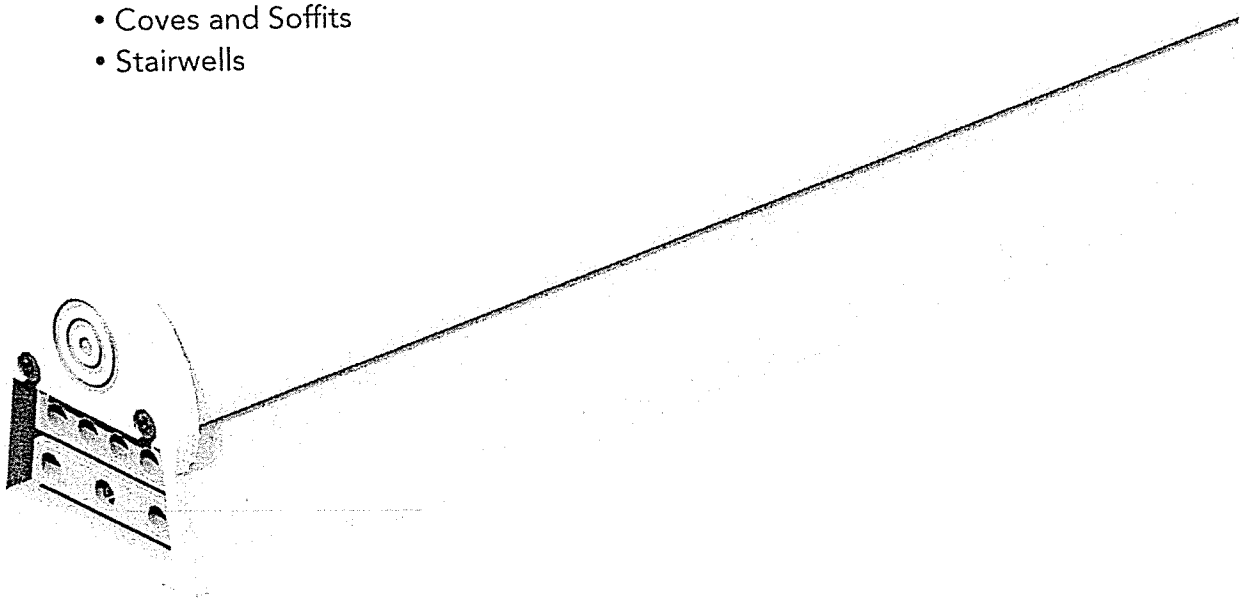
A comprehensive guide to understanding, specifying, stocking, and selling the LEDBarKit-Internal Driver fluorescent replacement.

The Linear Transformer

With up to 155 lumens per watt, and up to 25 years of virtually maintenance free operation, learn why smart decision makers use the The Linear Transformer when upgrading to LED.

Perfect replacement for

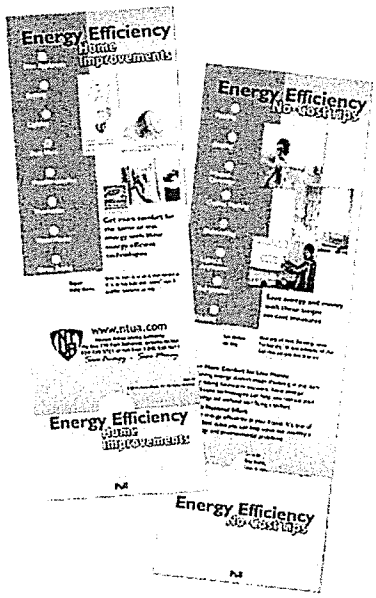
- Linear and general purpose
- Strips & Wraps
- Troffers
- Vapor Tights
- Low bay and High bay
- Coves and Soffits
- Stairwells



RemPhos by Light Efficient Design
lighting on target

Exhibit 2-19

CULVER



Energy Efficiency Slideguide

#84340

Reflecting the current ENERGY STAR® information and logo, this all-in-one guide delivers practical, no-cost conservation tips on one side and energy-saving home improvements on the other. It's an effective event handout. It also mails in a business-size (#10) envelope and fits in lobby display racks.

Quantity	250	500	1,000	2,500	5,000
Price each	$1.25	$1.18	$1.09	$1.03	$0.99

Item Size: 3 3/4"w x 8 3/4"h; Imprint area: 2 3/4"w x 1 1/4"h; Color: as shown; Imprint color: black

Made in America

Purchase Option:

Purchase Now

Setup:

$35.00

Quantity (no commas):

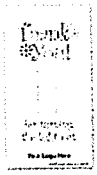
1

Related Products

Home Energy Efficiency Wheel

CFL Energy Saver Wheel

Turn Off Lights Flip Action Bookmark



Thank you Switch Plate Cover

On-Off Switch Cover

Exhibit 2-19

CULVER

Electrical Safety

Energy Conservation & Sustainability

Natural Gas and Electrical Safety

Natural Gas Safety

Water Conservation & Quality

Advanced Product Search >

Easy Ordering »

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Home Energy Efficiency Wheel

#88740

Spin the wheel for dozens of ideas to conserve energy in the home through easy actions like caulking windows and vents, and small habits like washing only full loads in the dishwasher and washing machine. This all-in-one guide also encourages customers to check with their local utility for more ideas, look for ENERGY STAR® appliances, and be aware of where energy dollars go in the home—and how to help the environment.

Quantity	250	500	1,000	2,500	5,000
Price each	$1.43	$1.29	$1.20	$1.14	$1.05

Item Size: 6 1/4"w x 11"h; Imprint area: 2 3/4"w x 1 1/2"h; Color: as shown; Imprint color: black

Updated!

Purchase Option:

Purchase Now

Setup:

$35.00

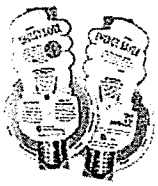
Quantity (no commas):

1

Related Products

Energy Efficiency Slideguide

Hard Hat Electrical Safety Wheel



CFL Energy Saver Wheel

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