

City of Bath, ME LED Streetlight Project Update

March 15, 2023





Schedule

	REALTERM
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	TERM	<u>meline</u>			
Project Name:	Bath ME LED Conversion RFQ	Contacts:	R	od Melanson	1
Project Number:	1369				
Project Manager:	Nadera Nawabi				
Quantity of Fixtures:	940	DATE:	March 13, 2023		
Stage	Task	Plan Start (Estimated date)	Plan End (Estimated date)	Action By	
	Sales				Complete
	Contract signed	9-De	ec-22	RTE/City	- Complete
	Kickoff Meeting	25-Ja	an-23	RTE/City	- Complete
	GIS				Operation
	GIS Audit	9-Jan-23	20-Jan-23	RTE	- Complete
	GIS QC and Data Processing	23-Jan-23	25-Jan-23	RTE	- Complete
	Post Survey Package Sent to City	30-Ja	an-23	RTE	- Complete
	Post Survey Questionaire Received Back from City	6-Fe	b-23	City	- In Progress
Streetligh	t Acquisition				
	RTE GIS audit comparison to Utility data	6-Feb-23	13-Feb-23	RTE	- In Progress
	Streetlight Acquisition from Utility	6-Feb-23	13-Feb-23	City	- In Progress
Selection of Equipme	ent and Labor				
	Material RFP Launch Date	9-Fe	b-23	RTE	- Complete
	Material RFP Close Date	23-F	eb-23	RTE	- Complete
	Material RFP Approval	2-M	ar-23	RTE	- In Progress
	Installer RFP Launch Date	9-Fe	b-23	RTE	- Complete
	Installer RFP Close Date	23-F	eb-23	RTE	- Complete
Photon	netric Design				e e inprete
	Photometric Designs	7-Mar-23	20-Mar-23	RTE	
	Photometric Design QC	20-Mar-23	23-Mar-23	RTE	1
	IGA		L I		
	Date IGA Sent to City	10-A	pr-23	RTE	1
	IGA approval by City	24-A	pr-23	City	
	Procurement				
	Procurement of fixtures and installation services	1-May-23	29-May-23	RTE	
	Installation		I I		1
	Installation of luminaires	5-Jun-23	26-Jul-23	RTE	1
	Installation End Date and Deficiency Clean Up	26-Jul-23	2-Aug-23	RTE	1
Co	mmissioning		- 1		
	Billing Change to Utility Submitted Date	9-Aug-23	16-Aug-23	RTE	1
	Billing Change Approved by Utility Date	16-Aug-23	13-Sep-23	Utility	1
	Post Incentive Submitted Date (if applicable)	9-Aug-23	23-Aug-23	RTE/City	1
	Post Incentive Approved Date (if applicable)	23-Aug-23	20-Sep-23	Incentive Administrator	1
Proie	ect Close-Out				1
	Close-out documents/Commissioning e-Binder	2-Aug-23	9-Aug-23	RTE	1

GIS Field Audit



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Products & Services |



Field Audit

- Streetlight Asset Management seldom a priority with municipalities or utilities
- First step in Asset Management: True-up the existing database
- RealTerm Energy's proprietary, customized ESRI data collection app
- The app clarifies:
 - Location of each asset
 - Ownership
 - Physical attributes
 - Site/asset conditions
 - 3rd party hardware
- Essential for optimizing design and efficiency of LED replacements
- Becomes the foundation for future management of existing and new assets



GIS Field Audit

ArcGIS v Bath_ME_P1369_Survey	
🔄 Details 📔 🖉 Edit 🛛 🚦 Basemap 🛛	
1 About 🔄 Content 📔 Legend	4 +
Legend	
Bath_ME_Recon_V2	268
L City award HPS	
City-owned - This	Θ
City-owned - LED	
MDOT - out of scope of work	
X No Replacement - PVT in CMP Data	
Private - out of scope of work	
+ Waiting Confirmation	Oak Grove
City-owned - design pending	Cemetary
• Other	Old Bri
	935
Bath_ME_P1369_20221214_Survey	
D Building Light - Decorative	
 Building Light - Other 	
Building Light - Wallpack	
Cobrahead	28 34 35
Decorative - Acorn Post Top	
Decorative - Bell Downlighting	Old Brun
Decorative - Caged Acorn	18 Wick Ro 29
Decorative - Globe Post Top	
Decorative - Lantern Pendant	43 🖧
Decorative - Lantern Post Top	42 42
Decorative - Lantern Side Mount	
Decorative - Other Downlighting	Edward J.
Decorative - Other Post Top	McMann Recreational
Decorative - Shoe Box	▼ 0 300 600ft Area 316 315 Coress Ave C
Trust Center Legal Contact Esri Report Abuse	

Products & Services |



ArcGIS Map



Color Temperature Selection



Photo: SuperbrightLEDs.com

2700K

- Best color match to current HPS lights
- Minimal blue light exposure
- Most preferred by International Dark-Sky Association (IDA)
- Use RP-8-18 as a guideline, or customized for client preferences
- Excellent choice for residential areas
- Lower CRI & Energy Savings

- Commonly used in working Most selected color temperature environments or commercial areas following AMA report regarding effects Preferred by most governmental of blue light
- Compliant with International Dark-Sky Association (IDA)
- Creates a mild, yet pleasant atmosphere

COLOR TEMPERATURE, VISUAL ACUITY AND SAFETY



3000K

4000K

- departments of Transportation for nonresidential roadway
- Highest energy savings
- Not compliant with International Dark-Sky Association



RealTerm Energy – LED Streetlight Conversion



Muni

City of Bid City of So. City of Aub City of Roc Town of Yo Town of Ru Town of Fa City of Car Town of W Town of M Town of Go Town of Ba Town of Pa Town of W Town of Do Town of Ca Town of M Town of N Town of Ro Town of Cu City of Sac Town of Br Town of Ke

LED Fixture	Color Temp	Municipality	LED Fixture	Co Te
Cooper	3000K	Town of Freeport	Acuity	30
Cree	<mark>2700K</mark>	Town of Thomaston	Acuity	27
Acuity	4000K	Town of Standish	GE	30
Acuity	<mark>2700K</mark>	Town of Ashland	Cooper	30
Acuity	3000K	Town of Washburn	Cooper	30
Acuity	3000K	Town of Raymond	GE	30
Acuity	3000K	Town of Mars Hill	Cooper	30
Cooper	3000K	Town of Waldoboro	Acuity	27
Acuity	2.7K/ <mark>3K</mark>	Town of Eagle Lake	Cooper	30
Cooper	3000K	Town of Oxford	Acuity	30
GE	3000K	Town of Island Falls	Cooper	30
GE	3000K	Town of Saint Agatha	Cooper	30
Acuity	3000K	Town of S. Thomaston	Acuity	<mark>27</mark>
GE	3000K	Town of Mapleton	Cooper	30
Acuity	2.7K/ <mark>3K</mark>	Town of Union	Acuity	<mark>27</mark>
Acuity	<mark>2700K</mark>	Town of Grand Isle	Cooper	30
Cree	<mark>2700K</mark>	Town of Bristol	Acuity	<mark>27</mark>
Acuity	3000K	Town of Newcastle	Acuity	<mark>27</mark>
Acuity	<mark>2700K</mark>	Town of Damariscotta	Acuity	<mark>27</mark>
Acuity	3000K	Town of Yarmouth	Cooper	30
Acuity	3000K	Town of Ogunquit**	Cooper	30
Acuity	3000K	Town of Harpswell**	Cooper	22
TBD		Town of Mechanic Falls**	Acuity	<mark>27</mark>
	LED Fixture Cooper Acuity Acuity Acuity Acuity Acuity Cooper Acuity Cooper Acuity GE Acuity GE Acuity Acuity Acuity Acuity Acuity Acuity	LED FixtureColor TempCooper3000KCree2700KAcuity4000KAcuity2700KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KGE3000KGE3000KAcuity3000KAcuity2700KAcuity2700KAcuity2700KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000KAcuity3000K	LED FixtureColor TempMunicipalityCooper3000KTown of FreeportCree2700KTown of ThomastonAcuity4000KTown of StandishAcuity2700KTown of AshlandAcuity3000KTown of WashburnAcuity3000KTown of Mars HillAcuity3000KTown of Mars HillAcuity3000KTown of Mars HillAcuity3000KTown of StandishoroAcuity3000KTown of Mars HillCooper3000KTown of Stand FallsCooper3000KTown of Stand FallsGE3000KTown of Stand FallsAcuity2700KTown of MapletonAcuity3000KTown of Grand IsleAcuity3000KTown of NewcastleAcuity3000KTown of NewcastleAcuity3000KTown of YarmouthAcuity3000KTown of YarmouthAcuity3000KTown of Ggunquit**Acuity3000KTown of Harpswell**	LED FixtureColor TempMunicipalityLED FixtureCooper3000KTown of FreeportAcuityCree2700KTown of ThomastonAcuityAcuity4000KTown of StandishGEAcuity2700KTown of AshlandCooperAcuity3000KTown of WashburnCooperAcuity3000KTown of Mars HillCooperAcuity3000KTown of Mars HillCooperAcuity3000KTown of Mars HillCooperCooper3000KTown of Saint AgathaCooperCooper3000KTown of Saint AgathaCooperGE3000KTown of MapletonCooperGE3000KTown of Grand IsleCooperAcuity2.7K/3KTown of Grand IsleCooperGE3000KTown of Saint AgathaCooperGE3000KTown of Grand IsleCooperAcuity2.700KTown of Grand IsleCooperAcuity2.700KTown of BristolAcuityAcuity3000KTown of DamariscottaAcuityAcuity3000KTown of YarmouthCooperAcuity3000KTown of YarmouthCooperAcuity3000KTown of YarmouthCooperAcuity3000KTown of YarmouthCooperAcuity3000KTown of YarmouthCooperAcuity3000KTown of YarmouthCooperAcuity3000KTown of YarmouthCoo

* In Deployment stage

** In Audit & Design stage



Lighting Design



Products & Services



Comprehensive Lighting Designs

- Designs calculated for each unique street
- Use RP-8-18 as a guideline, or customized for client preferences
- Optimized energy savings
- Dimming profiles can be specified
- Custom designs eliminate the mistakes of the past. Local input gathered from stakeholders.
- Adjusted for various color temperatures and roadway classifications
- Additional energy savings over traditional 1 for 1 replacement methodology

Result: Optimized Lighting for Each Roadway









Investment Grade Audit









Finance & Accounting

Business Case Analysis

Investment Grade Audit

- Updated inventory and fixture/control selection results
- Detailed breakdown and comprehensive analysis of costs & benefits
- Full financials including ROI & payback, financing options for decision-makers
- Installation costs with historically-derived, responsible provisional calculations (fuses, holders, arms, etc.)
- Forms the basis of our contract, minimizing the chances of overruns and delays

GHG CALCULATION

COST SAVINGS ANALYSIS

INSTALLER SELECTION

