

(The following is not a verbatim transcript of comments or discussion that occurred during the meeting, but rather a summarization intended for general informational purposes. All motions and votes are the official records).

PUBLIC WORKS COMMITTEE

Regular meeting of the Public Works Committee was held on Monday, September 14, 2015, in the Council Chambers, City Hall, Cranston, Rhode Island.

CALL MEETING TO ORDER:

The meeting was called to order at 6:30 P.M. by the Chairman.

Present: Councilman Mario Aceto, Chair
Councilman Steven A. Stycos, Vice-Chair
Council Vice-President Richard D. Santamaria, Jr.
Councilman Christopher G. Paplauskas
Council President John E. Lanni, Jr.

Absent: Councilman Michael J Farina

Also Present: Councilman Donald Botts, Jr.
Carlos Lopez, Chief of Staff
David Igliozi, Assistant City Solicitor
Kenneth Mason, Director of Public Works
Maria Medeiros Wall, City Clerk
Rosalba Zanni, Assistant City Clerk/Clerk of Committees
Heather Finger, Stenographer

MINUTES OF THE LAST MEETING:

On motion by Council President Lanni, seconded by Councilman Paplauskas, it was voted to dispense with the reading of the minutes of the last meeting and they stand approved as recorded.

CORRESPONDENCE:

PUBLIC HEARING:

OLD BUSINESS:

City's Participation in Streetlight Investment Program. (Cont. from 6/1/2015)
Adm. report on BOCAP award and time frame for completion of assessment

Mr. Mason presented an executive summary from Prism and stated that the City is still reviewing this report. He would like to revisit this sometime in November.

Councilman Stycos asked who would do the maintenance if we did this. Mr. Mason stated that Prism is presently the liaison and depending on how many cities and towns opt into this program, Prism would run it for the City and we would pay Prism a yearly fee instead of National Grid.

Councilman Stycos asked if they are a non-profit group. Mr. Mason responded that they started out as one but are evolving into a for-profit. Councilman Stycos asked what if we bought the equipment and didn't like Prism's performance, what would be our options? **Mr. Mason** stated we would have to go out to bid.

Councilman Aceto asked about the costs. Mr. Mason stated we currently pay 1.42 million and Prism projected maintenance costs are \$231,000. He referred to Page 5 of the Prisms' Executive Summary report, LED lights would cost approximately 3 to 4 million.

Councilman Aceto asked if there is any other grant money for any of this. Mr. Mason stated that he does not know. Councilman Aceto asked Council Vice-President Santamaria to ask Mr. Filarski, the City Council Grant Writer, to contact Mr. Mason to look into this.

Administrative Report: Resolution No. 2012-13 Supporting the Creation and Expansion of Outdoor Space, Recreation and City Parks.

Mr. Mason stated that he does not have any additional information at this time.

Councilman Stycos asked that this item be continued for three months.

On motion by Council Vice-President Santamaria, seconded by Council President Lanni, it was voted to continue this item for three months. Motion passed unanimously.

Rhode Island Resource Recovery Corporation Appeal dated November 21, 2012 from ruling dated November 5, 2012 on Aug. 15, 2012 Fine Notice. (Cont. 6/3/2013, 1/6/2014, 2/3/2014 & 7/7/2014 & 2/4/2015). [\[click here to view\]](#)

Rhode Island Resource Recovery Corporation Dec. 7, 2012 Appeal of Fine Notice dated Aug. 15, 2012. (Cont. 6/3/2013, 1/6/2014, 2/3/2014 & 7/7/2014 & 2/4/2015). [\[click here to view\]](#)

RIRRC Appeal of DPW Director's Decision on RIRRC's Petition for Review of Modification to Industrial Wastewater Discharge Permit #1808. (Cont. 11/4/2013, 1/6/2014, 2/3/2014 & 7/7/2014 & 2/4/2015). [\[click to view\]](#)

Chair stated that since Solicitor Kirshenbaum is not present this evening, the above three items be continued. No one objected.

- *Administration to submit street paving list (Council Majority Leader Archetto)*

Mr. Mason presented handout of street paving list. (Exhibit Attached) He stated that anticipated cost is \$2.1 million and \$2.5 mill has been budgeted in this year's Capital Budget. He also stated that this year's Budget, \$2.5 million for paving and \$1.8 million for drainage projects.

Councilman Stycos asked for following information for next month's meeting: list of the roads that have been paved in the last five years and breakdown of costs.

Council President Lanni asked for a copy of the top 100 worst streets in Cranston.

Council Vice-President Santamaria stated that even though Reservoir Ave. is a State road, it is a mess. He asked what the timeframe is for it to be repaired. Mr. Mason stated that he met with DOT a few weeks ago and all utility work is now complete. That was one of the components of the job. His understanding is DOT was negotiating with National Grid and Providence Water for final restoration of the road and they thought it would be done this fall.

Councilman Stycos asked how this list was compiled. Mr. Mason stated that they use six criterias:

1. We look at the 2009 report
2. We go out and look at the streets
3. A traffic count is done
4. CDBG eligibility
5. Collaboration with National Grid and Providence Water – paving in conjunction with other projects in the City, such as drainage work
6. Constituent and City Council request

Mr. Mason also stated that the following streets are CDBG streets: Caporal, Asia, Homestead, Standish, St. Mary's, Batcheller, Urbana and Vallone.

Council Vice-President Santamaria stated that he and Council President Lanni asked last year and during this year's Budget process, if any Ward 5 streets were eligible for CDBG monies and were told no and now there are five streets that are eligible. Mr. Mason stated that they were not eligible last year.

Councilman Stycos asked what role the Mayor plays in the process. Mr. Mason stated that the entire Administration is involved in the process. It is his initial recommendation.

Councilman Stycos asked Mr. Mason to provide a copy of his initial list for the next meeting.

Councilman Aceto asked what would be helpful for the future to have an absolute finite rating system.

Councilman Botts stated that discretion has to be used and not strictly a rating system.

- ***Report breaking down actual paving costs by street. (Councilmen Stycos & Archetto)***

Discussed with item above.

- ***Thomas Austin, 17 Barrett St. – Flooding of driveway (Council Majority Leader Archetto)***

No discussion.

- *82 Gordon St. – Administration to give update*

Mr. Mason stated that this issue is completed.

- *Rt. 10 – Reservoir Ave. – debris – Administration to give update*

Mr. Mason stated that most of the debris has been cleared.

- *Property at Randall and Atwood – Administration to give update*

Mr. Mason stated that the Inspections Department has contacted the new owners and they have committed to clean up the property.

NEW BUSINESS:

- *Request from National Grid for new pole location at Park Ave. [\[click to view\]](#)*

On motion by Council President Lanni, seconded by Council Vice-President Santamaria, it was voted to approve this request. Motion passed unanimously.

- *Macklin St. and Palmer Avenue Industrial area – Administrative report on violations and remedial action taken – Council President Lanni*

Mr. Mason stated that this was referred to the Building Official and he believes that the entity has been contacted regarding this issue.

Mr. Lopez provided a memo from the Building Official to Director of Administration.

Council President Lanni stated that he and former Director of Constituent Affairs, Mr. Barone, visited the area for approximately two hours and the place is deplorable. Many vehicles were visible without license plates. There were also piles of dirt. He does not know if this is a violation or not. This has been a problem since he was 5th Ward Council member in 2000. This place is run like a junkyard. He is embarrassed for the City, which they are not doing their job and he is embarrassed for the residents who have to put up with this. He expects the City to do a better job of enforcement. He will gladly go out to the area with Mr. Pikul., Building Official.

Councilman Paplauskas asked what is being done to mitigate commercial vehicles using Macklin St. **Mr. Lopez** stated that he can notify the Police Department to enforce this.

Councilman Aceto asked if the Administration can provide the Council with a list of offenders on Macklin St. and if they can be called in for a Show Cause. City Clerk stated that if she can find out the businesses, she can check what restrictions they have for those businesses and coordinate with the Inspections Department. Mr. Lopez stated that the Administration will work with the City Clerk regarding this.

Councilman Stycos asked that the following item be placed on the agenda for next month's meeting: Norwood Ave.

The meeting adjourned at 7:20 P.M.

Respectfully submitted,



Rosalba Zanni
Assistant City Clerk/Clerk of Committees

*Requested by Kenneth Mason
Public Works Comm, 9/14/15*

2015 Street Resurfacing

Street	Rating	Costs	Round 1	Round 2	Round 3	District
			completed	completed August	Start 9/28	
Narragansett Blvd traffic calming	NA	\$144,500			X	Ward 1
Hamden Road <i>Hampton Rd,</i>	10	\$12,000			X	Ward 1
Caporal Street	51	\$55,000	X			Ward 2
Forest Ave. - Pontiac to Mapleton Street	50	\$47,600		X		Ward 2
High School Avenue	46	\$53,000	X			Ward 2
Mapleton Street - Pontiac to Briarcliffe	50	\$68,000		X		Ward 2
Asia Street	52	\$20,000			X	Ward 3
Flint Avenue	48	\$108,000			X	Ward 3
Homestead Avenue	55	\$16,500			X	Ward 3
Jordan Ave. - Park to Flint	21	\$13,000	X		X	Ward 3
Standish Avenue	49	\$45,000	X		X	Ward 3
Cambio Court	26	\$33,700		X		Ward 4
Chicory Lane - Hope Hill to Baneberry	48	\$20,000		X		Ward 4
Collingwood Drive	38	\$33,100		X		Ward 4
Conley Ave.	50	\$35,300		X		Ward 4
Hall Lane	0	\$53,000	X			Ward 4
Hillcrest Drive North - Collingwood to cul de sac	29	\$51,700	X			Ward 4
Hillcrest Drive North - Collingwood to Cambio	51	\$23,500		X		Ward 4
Pasture View Lane - Chicory to Hope Hill	30	\$122,000	X			Ward 4
Phenix Avenue - Maple Farms to WW line	30	\$312,500	X			Ward 4
Wilbur - Conley to Locust Glen	50	\$59,400		X		Ward 4
Wilbur - Phenix to Apple Hill Drive	40	\$60,900		X		Ward 4
Wilbur - Apple Hill to Conley	25	\$104,600	X			Ward 4
Batcheller Ave.	50	\$59,000			X	Ward 5
Chappy Street	41	\$22,000	X			Ward 5
Chester Ave. - Vallone to Cavalry	50	\$45,700			X	Ward 5
Clemence Street	45	\$87,100			X	Ward 5
Farm Street	45	\$22,000	X			Ward 5
Hervey Street	46	\$35,000	X			Ward 5
Shean Street	48	\$22,000	X			Ward 5
St. Mary's Drive	44	\$55,200			X	Ward 5
Topeka Street	27	\$16,000			X	Ward 5
Urbana St.	51	\$48,900			X	Ward 5
Vallone Road	42	\$39,700			X	Ward 5
Dockside Way	40	\$17,000	X			Ward 6
East Belair Road	46	\$41,000	X			Ward 6
Longview Drive	30	\$90,000			X	Ward 6
West Belair Road	27	\$34,000	X			Ward 6
		\$2,126,900.00				

\$ 156,500

\$ 223,600

\$ 202,500

\$ 910,000

\$ 453,000

\$ 182,000

EXECUTIVE SUMMARY:

STREET LIGHT ACQUISITION & ENERGY EFFICIENCY IMPROVEMENT OPTIONS

The City Of Cranston has joined the Partnership for Rhode Island Streetlight Management (PRISM) in order to reduce its annual \$1,566,244 street lighting bill. PRISM is a nonprofit municipal-run collaborative program that manages streetlighting systems for RI municipalities and gains economies of scale to reduce the cost for large and small municipalities.

This summary introduces the topic, and then addresses the three key questions that Cranston will answer in determining the future of its streetlighting system. This summary has the following sections:

1. Background and Rationale
2. Should Cranston purchase its streetlights?
3. Should Cranston convert its lights to LED lights?
4. Should Cranston install an intelligent streetlighting control system?
5. Recommendations

1. BACKGROUND AND RATIONALE

For decades, aggressive utility pricing has made streetlighting an expensive public service for Rhode Island (RI) towns and cities. In response, a reform movement is being spearheaded by the Washington County Regional Planning Council (WCRPC) and its statewide streetlighting program, the Partnership for Rhode Island Streetlight Management (PRISM). PRISM manages streetlighting systems for RI municipalities, including supporting activities such as analysis, asset acquisition, and equipment upgrades. PRISM also advocates for towns and cities at the RI Public Utilities Commission (PUC). This report is the first phase of PRISM's service to the City of Cranston.

2. SHOULD CRANSTON PURCHASE ITS' STREETLIGHTS?

Rhode Island's communities are better positioned than ever before to participate in efficient and effective management of their streetlighting systems. State law (RIGL 39-30) now allows municipalities to acquire streetlighting assets in their communities for the net book value of those assets. Communities may now acquire streetlights from their utility for their depreciated value. **With PRISM maintenance, Cranston can enjoy a 40% annual savings. That is \$423,723 each year in reduced ownership and maintenance costs.**

Initial Savings: The table below outlines the savings through acquisition of the system and maintaining it “as-is.” It does not include conversion to more efficient LED lights—these are discussed below.

TABLE 1. PROJECTED ANNUAL SAVINGS (MAINTENANCE ONLY (NO LEDS))

	CURRENT S-14/10	S-05 ALL FIXTURES
NGRID FIXTURE CHARGES	\$792,455	\$0
NGRID DISTRIBUTION CHARGES	\$269,548	\$406,805
SUPPLY ENERGY COSTS (DE)	\$504,240	\$504,240
PROJECTED MAINTENANCE	Incl. above	\$231,474
TOTAL COSTS	\$1,566,244	\$1,142,520
ANNUAL SAVINGS W/MAINTENANCE	\$0	\$423,723

*Note NGRID customer owned distribution energy rates are higher because a portion of these rates are built into the fixture charges and under the customer owned S-05 rate the PUC included them in distribution energy rate.

3. SHOULD CRANSTON CONVERT ITS' LIGHTS TO LED LIGHTS?

LED Conversion: Communities can also benefit from conversion to Light Emitting Diode (LED) technology. LED lighting can further reduce municipal costs, potentially increasing their annual savings to as much as 60% or more. **Cranston can save \$1,069,465 annually, and receive a one-time energy efficiency incentive of \$484,161 if it purchases LED lights.** LED lights come with a ten-year warranty, and, as a result, also reduce maintenance costs. They offer improved color rendering, which can aid in public safety work because colors are correct and details are easier to see. LED conversions improve overall appearance of a community, have been very well received by the public, and are a highly visible demonstration of the City's commitment to cost savings, energy efficiency, and improved safety. In fact, no other investment in energy conservation provides a higher return than conversion to LED lighting. (See below for LED cost savings)

4. SHOULD CRANSTON INSTALL AN INTELLIGENT STREETLIGHTING CONTROL SYSTEM?

Intelligent Controls: Deploying LED lights also opens the possibility of using intelligent remote controls in place of the standard photocell. The standard photocell turns the light on at dusk and off at dawn, and the light burns at full power all night. Intelligent controls allow the light to be dimmed or brightened individually or in groups for all or part of the night, and thus allow the community to control lights to balance public safety, neighborhood preferences, and energy efficiency. These controls have an internal chip that, like a house meter, measures the energy consumed. **An Intelligent streetlighting system of LED lights and controls that dims the lighting by 50% from 11pm to 5am can increase the savings to \$1,198,114 each year and can receive a potential one-time incentive of \$788,851.**

The Table below compares the City-owned, “as-is” system to a control-ready LED system. Note that the current costs are \$1,566,244 and the savings are based on this cost. This table does not include financing costs—these are discussed in the following section.

	CITY OWNED COSTS CURRENT HPS SYSTEM	CONTROL READY LED	LED W/CONTROLS 50% DIMMED 11 PM TO 5 AM
NGRID DISTRIBUTION COSTS	\$406,805	\$159,522	\$71,296
DIRECT ENERGY COSTS	\$504,240	\$192,985	\$86,251
MAINTENANCE & ADMINISTRATION	\$231,474	\$144,271	\$210,581
TOTAL ANNUAL COST	\$1,142,520	\$496,779	\$368,130
SAVINGS FROM CURRENT	\$423,723	\$1,069,465	\$1,198,114
POTENTIAL INCENTIVE	N/A	\$484,161	\$788,851

Other public uses of the network: The controls communicate with nearby streetlights and, via the Internet, with the City through a mesh network. The communication network can also support other uses, such as synchronizing traffic signal controllers, and linking with motion sensors, weather monitors, pedestrian level monitoring, parking systems and, with

some increased bandwidth, cameras. In high crime areas the right system could support license plate and facial recognition as well as gun shot pinpoint. The system priced in this report does not have all the features mentioned above; if Cranston so chooses, we will add these in the Phase 2 analysis.

These systems also provide the potential for income for the city. Already, telecomm companies are inquiring about leasing space on the streetlight to attach micro cells to improve their phone coverage areas. The full potential of such systems is just beginning to emerge. The City could choose to install a control-ready system (but not the controls, at this time) or go with the full up system with controls. Both NGRID and the Rhode Island Office of Energy Resources (OER) are providing grants for the LED conversion and special funds for control systems, making it economically justifiable to purchase such a system now.

Managing the network and the associated network fees add to the maintenance costs but these are offset by the added savings generated by part-night and dimming. Studies show that the human eye does not detect dimming up to 30%, so some after-hours dimming, even at 50%, can be exercised and it will not be noticed. This has been the practice where dimming is allowed under a utility tariffs in other parts of the country.

Financing: The acquisition cost of \$451,372 and the \$2,943,142 cost to complete the LED conversion project, or the \$4,066,821 for LED/Controls conversion can be financed through the savings using a tax-exempt municipal lease that is treated as an operating expense. Current interest rates are below 3% for a ten-year lease. **The table below illustrates how financing the entire cost through a tax-exempt lease can save Cranston over \$700,000 per year.**

TABLE 3. TAX EXEMPT MUNICIPAL LEASE FINANCING: 3% FOR TEN YEARS

	CITY OWNED COSTS CURRENT HPS SYSTEM	CONTROL READY LED	LED W/CONTROLS 50% DIMMED 11PM TO 5 AM
AMOUNT FINANCED	\$451,372	\$2,943,142	\$4,066,821
LEASE COSTS	(\$51,373)	(\$334,976)	(\$462,869)
NET ANNUAL BUDGET SAVINGS	\$372,350	\$734,488	\$735,245

The City could also if it chose pay some of the savings forward by increasing the amount financed. Interest rates would be slightly higher but even operating within the 10-year model the City could receive a check for \$700,000 and still save over \$45,000 per year on the street lighting budget.

These savings are only possible because of the work done by PRISM over the past several years. The City may now avail itself of the opportunity to convert community lighting to LED technology, improve public safety, generate potential revenue, and demonstrate its commitment to providing better services at lower costs to its citizens. It is clear from our analysis and the structure of the incentives being offered now that the LED system with controls is the best overall choice for the City.

Converting to LED lights can reduce energy and CO2 pollution and increase savings significantly. The table below shows the environmental savings impact of the LED conversion.

TABLE 4. ENVIRONMENTAL IMPACT OF LED CONVERSION

	CITY OWNED COSTS CURRENT HPS SYSTEM	CONTROL READY LED	LED W/CONTROLS 50% DIMMED 11PM TO 5 AM
SYSTEM KWH	5,171,699	1,906,384	1,406,387
BILLED KWH	N/A	2,028,006	1,406,387
KWH SAVINGS	N/A	3,225,680	3,725,678
BUDGET KWH ENERGY SAVINGS	N/A	3,104,058	4,068,272
% KWH SAVINGS	N/A	62.9%	72.6%
METRIC TONS OF CO2 SAVED	N/A	2,140	2,805
EQUIVALENT AVERAGE ANNUAL CAR MILES SAVED	N/A	5,096,205	6,679,241

With control ready LED lights Cranston can save over 62% kWh usage, and if Cranston chooses a streetlighting system of LED lights and controls that dims the lighting by 50% from 11pm to 5am they can increase their energy savings to over 72% kWh usage. If the City selects the control ready LED lights they can save up to 2,140 metric tons of CO2 per year, which is equivalent to an average of 5,096,205 annual car miles. If they choose the intelligent lighting system with the dimming feature they can save up to 2,805 metric tons of CO2 per year, which is equivalent to 6,679,241 annual car miles saved.

5. RECOMMENDATIONS

1. **Audit and Map the System** – The data set is clearly inaccurate. The billing errors must be identified before the purchase is complete in order to get a refund. Once the City owns the lights this opportunity is lost. An audit would not only create a valuable asset database for the City and would be useful if the City opted for the controls sometime in the future. This would be undertaken almost immediately so that it would be complete before we can get the final acquisition documents from NGRID.
2. **Acquire the system from NGRID-** Once the City gives notice to NGRID of its intention to move forward with the acquisition there will typically be at least a 60 day delay to finalize the paperwork. During this time delay we would endeavor to complete the system GIS audit.
3. **Complete a conversion to LED technology with a control ready system.** Work with the water enterprise to determine the viability of going to the wireless read of the water meters using the street lighting network. If it looks like this is an option the City would like to consider review the financing options to see if there is a means to work the financing given any restrictions on mixing City funds with enterprise funds and make adjustments to the financing model as needed.