

City of Alexandria, Virginia

MEMORANDUM

DATE: APRIL 6, 2011

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: BUDGET MEMO # 37 : MT. VERNON AVENUE PEDESTRIAN LIGHTING (SOLAR LIGHTING)

This memorandum responds to a request from Councilman Krupicka concerning costs to fund pedestrian solar lighting on Mount Vernon Avenue per recommendations in a report prepared by the Solar Lighting Pilot Project Committee of the Del Ray Business Association and the Del Ray Citizen's Association.

Background:

As part of the Approved FY 2010 Capital Improvement Program (CIP), the Mt. Vernon Avenue Lighting project was noted as an unfunded program. If resources were available, the project was to provide a matching grant program to support a pilot program for the installation of building mounted lights along Mt. Vernon Avenue. Project funding was intended to support a public-private partnership between the City and property owners along Mt. Vernon Avenue. A total of \$40,000 in City funds was requested to create a pilot program and partner with property owners for light installation. Because the project was not funded, implementation details were not developed.

On April 5, 2010, the Pedestrian Solar Lighting Committee released a report that provided a cost estimate of \$274,200 for a four block pilot program. As City staff developed the Approved FY 2011 CIP, all City projects were balanced to available revenues and this project was eliminated from the CIP due to the lack of funding. Given that the City withdrew this project from the Approved FY 2011 CIP, City staff time has not been focused on the design, planning, and implementation of this project. Additionally, the level of interest of property owners interested in participating, and cost sharing details still had not been determined.

At the time the report was being prepared, members of the committee were working with Congressman Moran's office to explore federal grant funding opportunities for this project. To date, federal funding has not been identified.

Solar Lighting Pilot Project Committee Report:

In the Solar Lighting Pilot Project Committee report, the cost per solar light was estimated between \$5,250 for a building mounted light and \$7,700 for a pole mounted light (including design, installation, and battery replacement) plus professional and administrative costs. The group studied a four block area from Uhler Avenue to Windsor Avenue along Mount Vernon

Avenue, and their recommendation of a mixture of building mounted lights and pole mounted lights (all solar lights) was estimated to cost \$274,200 for thirty-two lights in that four block area (see Attachment A for detailed four block costs). The group also studied one block in detail (Oxford Avenue to Del Ray Avenue), and recommended three building mounted and five pole mounted solar lights to be installed on that block with an estimated cost of \$71,000 (see Attachment A for one block costs). The estimated costs of \$71,000 (one block) or \$274,200 (four blocks) did not include a breakdown of the public versus private funding needed for the project. Given that this project was not funded, City staff did not complete a thorough review of the report's recommendations, create design standards or an implementation plan for a pilot program, or develop a model for the necessary public-private partnership.

Issues:

If funding were provided for a pilot program, City staff would need to consider the following issues associated with total project costs and implementation before kicking off the pilot program:

- Defined Planning Area – the Solar Lighting Project Committee indicated that they would ultimately like to see the project extend from Braddock Road to Hume Avenue (twenty blocks). City staff has not determined if this is the appropriate size of the planning area for this project.
- Private Participation – is it unknown how many property owners in the defined planning area or pilot project area would be willing to participate in a public-private partnership to install solar lights. Due to the fairly expensive costs of implementing the plan, a public-private partnership is a necessity.
- Cost Sharing – the percentage of costs to be paid by the City versus costs by property owners would need to be established. Additionally, the issues of on-going operating and maintenance costs would need to be addressed before installation.
- Types and Design of Lights – in order to implement a pilot program, there would need to be consensus from the property owners in the defined planning area regarding the types of lights (building mounted versus pole mounted), and the design of the lights so there would be consistency throughout the Mt. Vernon Avenue corridor.
- Logistics of Implementation – the Solar Lighting Project Committee studied one block in detail (Oxford Avenue to Del Ray Avenue), and recommended three building mounted and five pole mounted lights for the block. The block would then need to be studied for individual photometrics, interference from tree canopy, and building locations with respect to the setback from the sidewalk to determine what is necessary and practical. Additionally, staff would need to consider the impacts of placing pole mounted lights in right-of-ways with respect to existing underground utilities and other potential construction conflicts.
- Property Owners that Choose not to Participate – property owners that are not interested in participating in the program would need to be addressed. Conceivably, entire blocks could be without lighting should business elect to not be a part of the public-private partnership. The aesthetics of gaps in lighting would need to be considered.

In considering implementing a pilot program, the City would need to develop a cost estimate for implementation throughout the entire planning area (once that area is defined). Because design

consistency and the public-private partnerships are critical to this project, the pilot project would be difficult to implement without understanding the project as a whole.

Based on the Solar Lighting Project Committee's cost estimate of \$274,200 for implementation in a four block area, total implementation costs in the defined planning area could exceed well over \$1,000,000, for which the City has not identified a funding source. Full implementation of the project would not be possible without a significant public-private partnership – including addressing the issue of on-going operating and maintenance costs – which has not been negotiated to date.

ATTACHMENT A
MOUNT VERNON AVENUE PEDESTRIAN SOLAR LIGHTING IMPLEMENTATION COSTS

Category	Description	Cost Per Unit	Units Needed in Four Block Area	Total Costs Four Block Area	Units Needed One Block (Oxford to Del Ray)	Total Costs One Block (Oxford to Del Ray)
Equipment	Wall Mounted Lights	\$ 2,860.00	16	\$ 45,760.00	3	\$ 8,580.00
Equipment	Pole Mounted Lights	\$ 3,300.00	16	\$ 52,800.00	5	\$ 16,500.00
Equipment	Battery Replacement Costs	\$ 600.00	32	\$ 19,200.00	8	\$ 4,800.00
Installation	Wall Mounted Lights	\$ 1,790.00	16	\$ 28,640.00	3	\$ 5,370.00
Installation	Pole Mounted Lights	\$ 3,800.00	16	\$ 60,800.00	5	\$ 19,000.00
Professional Costs	Engineer, Architect, Electrician, etc.			\$ 56,000.00		* \$ 14,000.00
Administrative	General Admin Costs; Shipping/Handling			\$ 11,000.00		* \$ 2,750.00
Total Costs				\$ 274,200.00		\$ 71,000.00

* One block costs are estimated as 25% of total costs for these two categories.

All cost information taken from the "Pilot Project for Pedestrian Solar Lighting for Mount Vernon Avenue Alexandria, Virginia" dated April 5, 2010.