

**MOORPARK CITY COUNCIL
AGENDA REPORT**

TO: The Honorable City Council

FROM: Jeremy Laurentowski, Parks and Recreation Director *SL*

BY: Jessica Sandifer, Management Analyst *JS*

DATE: August 13, 2013 (Special CC Meeting of September 11, 2013)

SUBJECT: Consider Plans and Specifications and Authorization to Advertise for Construction Bids to Replace the Security Lights at Poindexter Park, Campus Park, and the Moorpark Police Services Center (Project 7801, 7805, 2005)

BACKGROUND

In July 2012, the City Council authorized staff to hire a lighting consultant to prepare plans and specifications to replace the light standards at Campus Park and add lighting at Poindexter Park to deter night time loitering and increase security. Staff's original recommendation was to replace all five (5) light standards at Campus Park and twelve (12) existing low level pedestrian lights at Poindexter Park with 125 watt vandal resistant light emitting diode (LED) security lights on 25' light poles. In addition, staff recommended installing occupancy sensors on all the light standards, which increases the energy efficiency of the lights by reducing illumination to 30% of the light's full potential when the lights are on and no activity is occurring in the area. If there are patrons using the park, the occupancy sensors will activate and increase the lights to full illumination.

DISCUSSION

In December 2012, the lighting consultant prepared the plans and specifications for the projects as outlined above. However, in keeping with the City's top ten priorities of promoting sustainability and increasing energy conservation, staff felt that the introduction of the LED security lighting in only one area of Poindexter Park was a missed opportunity to reduce energy consumption for the entire park. Subsequently, staff requested that the lighting consultant prepare a full set of plans to retrofit all of the

existing security lights and low level pedestrian lights at Poindexter Park with LED luminaires.

During the time that the plans for Poindexter Park and Campus Park were being prepared, staff became aware of the fact that the existing ballasts and metal halide bulbs at the Police Services Center (PSC) have exceeded their life expectancy. According to the manufacturer, the ballasts have a life span of approximately 35,000 hours, or eight years, and the bulbs have a life span of approximately 24,000 hours, or six years. The existing thirty-one parking lot lights consist of 320W metal halide bulbs. Approximately half the bulbs were replaced in 2011. The remainder of the bulbs and the majority of the ballasts are the original equipment that was installed during the construction of the PSC in 2005. In order to keep maintenance costs low, the industry standard for maintaining lighting systems is to replace all the ballasts and bulbs when the equipment has reached approximately three quarters of its life span. However, in an effort to promote energy conservation and reduce direct electrical costs, staff contracted with the lighting consultant to prepare plans and specifications to replace the existing 320W metal halide fixtures with 139W LED luminaires, reducing the overall energy use by approximately 56%.

Additionally, it was determined that the concrete footings for the lights at Campus Park are in need of replacement, as the anchor bolts supporting the light poles have rusted over time. The lighting plans for Campus Park have been designed to include new concrete footings, in addition to the replacement of the light poles and fixtures.

The new project scope includes the replacement of the five (5) 400W metal halide (MH) area lights and poles at Campus Park with five (5) 163W LED luminaires and concrete footings; replacement of eight (8) 250W high pressure sodium (HPS) area lights and ten (10) 100W pedestrian lights and poles with 73W LED luminaires on 25 foot poles, eighteen (18) 400W HPS lights with twelve (12) 73W LED luminaires, thirty (30) 100W pedestrian lights with 40W LED luminaires and replacement of one (1) 150W and four (4) 100W building mounted lights with five (5) 30W LED fixtures at Poindexter Park; and the replacement of thirty-one (31) 320W MH parking lot lights with 115W LED luminaires at the Police Services Center.

The plans and specifications have been designed to meet 2014 Title 24 requirements, as well as Southern California Edison's (SCE) Business Incentives Program. The manufacturer and model number of the LED luminaires specified by the lighting consultant have been selected from a product list endorsed by SCE, and in March 2013, the City received a Customized Solutions contract to proceed with this project as designed. This process was necessary in order to receive direct cost incentives from SCE, as well as a credit for energy conservation through kilowatt hour (kWh) reductions. The reduction in energy will be applied to the City's Energy Leadership Partnership (ELP) with SCE. In addition, the security lights specified for these projects, with the exception of the low level pedestrian lights at Poindexter Park, come with a ten year

manufacturer warranty. To staff's knowledge, no other LED manufacturer endorsed by SCE has an equivalent warranty. Due to these facts, staff does not feel that product substitutions should be approved for these projects.

It should be noted that LED lighting generally exceeds 50,000 hours of use and the life span of most products are typically in the range of fifteen to twenty years.

The anticipated project schedule is as follows:

Advertise for Bids	09/16/13, 09/21/13
Mandatory Job Walk	09/24/13
Bid Opening	10/8/13
Award of Contract	10/16/13
Notice to Proceed	10/30/13
Project Completion	12/31/13

FISCAL IMPACT

When staff presented this project to the City Council in 2012, staff estimated that this work would cost the City approximately \$80,750; \$23,750 was estimated to replace the five light poles and restroom lights at Campus Park, and approximately \$57,000 was estimated to replace the ten light poles and restroom lights at Poindexter Park, with a total return on investment (ROI) for both projects of approximately ten to twelve years. Staff anticipates that the cost to replace the lights at Campus Park will increase by approximately \$7,000 due to the new concrete footings, for a total project cost of \$31,000. The cost to upgrade the lighting at Campus Park with new LED luminaires is relatively equal to the cost to replace the lighting in-kind. By increasing the project scope at Poindexter Park to a total of sixty-one light poles, the project cost will increase by approximately \$135,000, for a total project cost of \$192,000 and an ROI of approximately twelve years. Staff estimates that the retrofit of the Police Services Center lights to LED lighting will cost approximately \$61,000. The replacement of the existing ballasts and bulbs would cost approximately \$15,000. The use of LED fixtures is an increase of \$46,000, as compared to replacing the existing ballasts and bulbs in-kind, with an anticipated ROI of approximately six years. The total cost for all three projects is estimated at \$284,000.

Replacing the existing lights with LED lights will result in the following annual kWh and electricity savings per location:

LOCATION	ESTIMATED PROJECT COST	SCE REBATE	* PLANNED MAINT. & PROJECT COSTS	ADJUSTED PROJECT COST	KWH SAVINGS	ANNUAL ELECTRICAL & MAINT. SAVINGS	ROI (YEARS)
CAMPUS PARK	\$ 31,000	\$ 338	\$ 31,000	\$ (338)	8,653	\$ 1,384	0
POINDEXTER PARK	\$ 192,000	\$1,905	\$ 57,000	\$ 133,095	67,533	\$ 10,805	12
POLICE SERVICES	\$ 61,000	\$2,961	\$ 15,000	\$ 43,039	44,869	\$ 7,178	6
TOTAL	\$ 284,000	\$5,204	\$ 103,000	\$ 175,796	121,055	\$ 19,367	9

* The Adjusted Project Costs and overall ROI takes into consideration necessary in-kind replacement costs, planned maintenance costs as compared to new LED lighting, or planned new project costs, such as the addition of security lights at Poindexter Park.

Based on these estimates and the total adjusted project costs, the City can expect a total ROI of approximately nine (9) years for all three projects, when compared to standard metal halide or high pressure sodium lights. The ROI for Poindexter Park is higher than the other projects, simply due to the fact that the ratio of overall energy savings, when compared to the total number of fixtures proposed for replacement and overall project costs, is lower than the other projects. It should be noted that the ROI takes into consideration the funding that would be required to replace the fixtures in-kind, such as the cost to replace the poles at Campus Park and the cost to replace the remaining bulbs and ballast at the Police Services Center, as these costs would be required for normal maintenance procedures. The cost recovery also takes into consideration the cost to replace the security lights and restroom lights at Poindexter Park with LED lights, as this work is necessary to deter vandalism and increase visibility during evening hours.

As mentioned previously, this project has been approved through SCE's Business Incentive Program and will qualify the City for the Silver Level Tier in Southern California Edison's (SCE) Energy Leader Partnership and contribute kWh savings towards attainment of the Gold Level Tier. Attainment level of the Silver Level Tier will qualify the City for direct cost rebates from Southern California Edison (SCE) for this project. Staff will request additional appropriation for this work once the bids have been obtained and will prepare a more detailed cost analysis and estimated cost recovery for the City Council to review at that time.

STAFF RECOMMENDATION

Approve the plans and specifications for the subject project, and authorize staff to advertise for construction bids.

Attachment:

1. Plans and Specifications (Submitted under separate cover).
2. Request for Bids: Lighting Upgrade Project for Campus Park, Poindexter Park, and the Police Services Center. Specification No. PRCS-13-001 (Submitted under separate cover).