



Meeting: GGSG
Meeting Date: 9/20/2011
Agenda Item: #7c

Mission Statement
Delivering quality services in a courteous, cost-effective and efficient manner

VILLAGE BOARD MEETING STAFF REPORT

REPORT TO: GGSG Task Force members
REPORT FROM: Leigh Ann Wagner Kroening, Administrative Assistant
Geoff Farr, Director of Engineering
AGENDA ITEM: Update on Howard Boulevard lighting and LED/MH fixture comparison
ACTION REQUESTED: Ordinance Resolution Motion Receive/File

BACKGROUND INFORMATION

Two years ago, the Go Green Save Green Task Force unanimously recommended the Village Board approve using TIF #3 funds to purchase three LED streetlights (with the same fixtures) for the North-South leg of Howard Boulevard behind Kwik Trip off Cardinal Lane.

The cost comparison for traditional metal halide lights versus energy-saving LED lights were presented to GGSG and the Village Board as follows:

<i>Traditional Metal Halide</i>	<i>LED</i>
\$18,000 (\$6,000 per pole)	\$21,000 (\$7,000 per pole)
\$13,000 borings + restoration	\$15,000 borings + restoration
	<u>\$2,000 electrical service (separate meter)</u>
<u>\$31,000 (\$30,000-\$35,000)</u>	\$38,000 (\$35,000-\$40,000)

LED light is a white light as are the existing metal halide (MH) streetlights, so is no significant difference in color. However, LED streetlights do not put out as much light and thus require more fixtures.

WPS had agreed to meter the LED streetlights separately so a cost and energy comparison could be conducted to review the efficiency of LED lighting.

UPDATE

At the July GGSG meeting, Task Force members asked for an update on the Howard Boulevard LED lighting project. G. Farr put together the following report:

Period June 1, 2010 to May 31, 2011

Howard Boulevard LED / MH fixture comparison

5 MH lights 8141 KWH per year = approximately 370 watts per fixture @ average 90' pole spacing = 4,100 watts per 1,000 feet of roadway (11 poles).

3 LED lights 3079 KWH per year = approximately 235 watts per fixture @ average 60' pole spacing = 3,900 watts per 1,000 feet of roadway (16 poles).

Unfortunately the energy savings of 876 KWH per year (200 watts, average 12 hours per day, 365 days per year) on a 1,000-foot street of \$105 per year) is lost in this theoretical example due to this particular very expensive LED fixture at an additional cost for five additional \$3,500 poles and 16 LED fixture upgrades (\$2,000 each) or \$49,500 more on a 1,000 foot street (excluding installation costs for the five additional poles). Other fixtures / brands likely do not have as high of an upfront material cost as the fixtures chosen for the Village Center. Also results can vary based upon site particulars (this site is not very uniform) and should not be assumed to be indicative of costs on future projects.

The yellow lights in the red boxes show the LEDs.

