LED CONVERSION



STREET LIGHTING IN PALM BEACH COUNTY

Amy Harris, PE

WHY CONVERT TO LED?







BENEFITS OF LED

LEDs offer:

- Superior color rendition and differentiation
- High color rendering index (CRI)
- More natural colors than HPS
- High efficiency
- Energy savings up to 50%+
- Greater variety of choices

Generally cost SAVINGS



SURTAX PROGRAM LED CONVERSION

- We have approximately 12,000 HPS lights to be converted within the 10 year plan.
- Majority are FPL owned and offer options to convert
- Remaining are owned by FDOT that we maintain for them with some compensation to do so
- Only 1% of our existing lights are in High Mast Towers
- High Mast Towers are the only systems that have mechanical maintenance in addition to electrical

80 ft. High Mast Towers



- 44 Towers (3 lights each)
- **132** Lights

40 ft. Conventional Lights



- **220 260** Lights
- \$300,000- \$400,000 CIAC

Maintenance Issues- Mechanical & Electrical



















FDOT AGREES



RICK SCOTT

3400 W. Commercia Blva. Furl Lauderdelle, Fl. 33309 ANANTH PRASAD, P.E. SECRETARY

AUE & 9 2012

August 15, 2012

Mr. Goorge T, Webb, County Engineer
Path, Beach, County - Department of Engineering and Posics Works
P.O. Box 21229
Work Path Beach, Pt. 30416-1229

Subject: High Mast Light System - SR 7 from SR 80 to Hypoluxo Road

in response to your letter disted June 25, 2012, the Florida Department of Transportation (Department) has reviewed your concerns and offers the following.

Sead on recent discussions with the County's Staff, the Department recognizes that the existing high most lighting system requires a significant himsure of maintenance or presence of It introduced by the curbes of connecting lighting system, incomplication recognizes the County appropriate to design and invisible a row conventional lighting system, in conjunction recognizes the County appropriate to design and invisible a row conventional lighting system, in conjunction with PPL, within the unintempropried when from I hap one Road to Windrages Drive and profiler more for baselve tear or grant gases with the maintenance of the faithful intelligence and, as preducing approach, this Department will remove the existing high rest lighting that complete for a new installed aginting system.

The Department currently twis an invascional State Highway Lighting, Meintenance, and Compensation Agreement with the Village of thous Polin Beach (Village) to maintain at lighting coalest on the stable highway system with in the Culy boundarist buil is door of ourserful nucled the high mental lights and RF. It is the Department accentage based on mornt conversations, that the Village has indicated a willingness to sessure maintenance of the high mental lights within their countaries if the County makes the receives are personal and existents from the Uli working consider. This loss one the new high mast, gift pole that will be installed as part of the projection the SF 7 bridge over the C-b1 canal [FM a 2/278-4].

The Department code and have an assecuted State Highway Lighting. Mar lendings, and Compensation Agreement with the City of Wellington. The Department pits to ment with City actif within the next several works to discuss this issue. The County will be finded to this receiving and, hopefully a resolution will be found.

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The Depathment less burn in contract with Ma. Any Hents from your office to coordinate the restolution of this marter. Please confact the Department's Debria Traffic Plans Engineer, Ma. May Cheng, at 1984) 777-4498, but fine at (1) \$68-538-9435 cut 44(5) or via engular times changed state I use, should see a constraint and information. I hank you open for your continuous cooperation.

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Jamy of Caully

Geny O'Reilly, P.E.

Director of Transportation Development

cot Tanya N. McConnell, P.E., Departy County Engineer Staver Gerrier, P.E., Assistant County Engineer Army Harris, P.E., Spotial Projects Me. Jages

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• The Department recognizes the County's proposal to design and install a new conventional lighting system, in conjunction with FPL, within unincorporated area from Hypoluxo Road to Whitehorse Drive as a positive move to resolve the ongoing issues with the maintenance of the lighting in this area. As previously agreed, the Department will remove the existing high mast lighting upon completion of a new installed lighting system.

WHY?

....80' High Mast **Towers** vs. 40' FPL **Poles**

- Towers have both mechanical & Electrical maintenance
- LED technology is less
 efficient for higher wattage
 replacement needs, so
 minimal savings
- Many towers have 1000W lights

- Maintenance duties to FPL, relieving PBC staff
- Savings of over \$50,000 annual in maintenance by PBC
- Increase in FDOT compensation of approximately \$35,000 a year

WHAT WE NEED TO BEGIN:

- Funds to begin illumination analysis and layout design by consultant (Estimate \$106,000 in FY 2025 to be sufficient) to move to FY 2019.
- FPL to complete design of equipment, prepare Work Order & Agreements
- FDOT to give final approval of new design, and program removal of Towers.
- Installation by FPL estimated 2021, (which coincides with the FY 2021 funds available for Tower Rehab of \$500,000)

QUESTIONS?

