

MICHAEL P. VICTORINO
Mayor

ROWENA M. DAGDAG-ANDAYA
Director

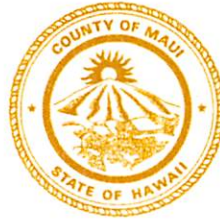
STEPHEN M. WELLING, P.E.
Deputy Director

GLEN A. UENO, P.E., L.S.
Development Services Administration

RODRIGO "CHICO" RABARA, P.E.
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COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM 434
WAILUKU, MAUI, HAWAII 96793

August 20, 2019

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Honorable Michael P. Victorino
Mayor, County of Maui
200 South High Street
Wailuku, Hawaii 96793

For Transmittal to:

Honorable Kelly King, Council Chair
Maui County Council
200 South High Street
Wailuku, Hawaii 96793

APPROVED FOR TRANSMITTAL

Michael P. Victorino 8/21/19
Mayor Date

Dear Council Chair King:

**SUBJECT: EARLY ENVIRONMENTAL CONSULTATION REVIEW
MAUI COUNTY LIGHT EMITTING DIODE (LED) STREETLIGHT
CONVERSION PROJECT, MAUI COUNTY, HAWAII
DPW PROJECT NO.: 18-34**

The County of Maui Department of Public Works (DPW) seeks your advice and input regarding the County's proposal to replace all existing County-owned High Pressure Sodium (HPS) streetlight fixtures located within Maui County roadway rights-of-way with Light Emitting Diode (LED) fixtures. This project would utilize existing poles while replacing streetlight fixtures (bulbs) throughout Maui County. County funds are intended to be utilized for this project.

This early consultation letter is being sent in support of an upcoming environmental assessment being conducted by the DPW pursuant to Hawaii Revised Statutes (HRS), Chapter 343, and Hawaii Administrative Rules (HAR), Title 11, Chapter 200.1.

COUNTY COMMUNICATION NO. 19-374

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The County of Maui is following the other Counties and the State of Hawaii Department of Transportation (HDOT) in converting its streetlights to LED fixtures. They have all completed or are completing their streetlight conversions (Hawaii County: approximately 10,000 fixtures; Kauai County: approximately 3,500 fixtures; City & County of Honolulu: approximately 52,000 fixtures; HDOT: approximately 20,000 fixtures statewide). On Maui, the HDOT completed its LED streetlight conversion in 2018.

PROJECT DESCRIPTION

In comparison to the HPS fixtures proposed to be replaced, LED fixtures have a better color rendering index which means colors and objects will have better visibility and objects will be sharper, which maintains the safety of the roadway, drivers, pedestrians, and bicyclists.¹ Initial public outreach and scoping included a pilot LED streetlight study, which Maui Electric Company and the DPW collaboratively developed and launched in 2016. The two (2)-month pilot involved the installation of 24 LED streetlight fixtures along Maui Lani Parkway in Kahului to test and evaluate various types of LED lights. The pilot provided opportunities for the public, law enforcement representatives, and community organizations to share feedback on the characteristics of the different types of LED lighting, such as glare and visual acuity. The LED fixtures that were determined to be the preferred alternative following the 2016 pilot study are 2700K bulbs made by General Electric. Specifications for the General Electric LED lights can be found using the following link: [https://products.currentbyge.com/sites/products.currentbyge.com/files/documents/document file/OLP3128-GE-LED-Evolve-Roadway-Data-Sheet.pdf](https://products.currentbyge.com/sites/products.currentbyge.com/files/documents/document%20file/OLP3128-GE-LED-Evolve-Roadway-Data-Sheet.pdf).

The project involves the replacement of approximately 4,800 streetlight fixtures located along County roadways on Maui, Molokai, and Lanai islands. These fixtures are owned and maintained by Maui Electric Company. Work includes the removal and disposal of existing HPS streetlight fixtures and the installation of new LED streetlight fixtures. Work would be completed during normal business hours of 8:00 a.m. to 5:00 p.m. and would not require the closure of any roadways or the diversion of traffic. The project is anticipated to cost approximately \$4 million and is expected to begin within six (6) months of the completion of this environmental review with project completion approximately 12 months later.

¹<https://www.mauielectric.com/community-and-education/led-streetlight-installation/led-streetlight-installation-faq>

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The project is proposed to be completed in two (2) phases:

Phase 1 includes approximately 1,889 fixtures in the following districts:

- Kahakuloa-Waiehu-Wailuku-Kahului (1,687 fixtures);
- Kailua-Hana (49 fixtures); and
- Olowalu-Napili (153 fixtures).

Phase 2 includes approximately 2,931 fixtures in the following districts:

- Lahaina-Napili (369 fixtures);
- Ma'alaea-Makena: (957 fixtures);
- Ulupalakua-Kula-Pukalani-Makawao-Haiku-Kuau-Spreckelsville: (1,098 fixtures);
- Moloka'i: (365 fixtures); and
- Lana'i: (142 fixtures).

The project will implement a wireless adaptive control system which will allow the County of Maui, HDOT, and Maui Electric Company to remotely manage the operation of the streetlight infrastructure in real-time and at the individual fixture level. This technology allows for dimming/brightening of individual or groups of lights, and also includes remote system monitoring which provides notification when a fixture is burnt out and needs replacement. The project will also include GPS mapping of the streetlights.

PROJECT NEED AND PURPOSE

The purpose of the project is to increase roadway safety and visibility while simultaneously reducing energy consumption and County of Maui operating expenses. LEDs will provide better service reliability, lower maintenance costs, lower operating costs, and reduced carbon emissions due to their lifespan being about four (4) times that of an HPS lamp and their energy consumption being less than 50% of comparable HPS fixtures. The reduced energy consumption alone is estimated to result in savings of approximately \$650,000 per year in electricity cost for the County of Maui.

The proposed LED fixtures have been designed to provide an improved distribution of light, increasing visibility in dark spots between streetlight poles, rather than solely projecting light directly below streetlight fixtures as the HPS luminaires do. The LEDs are also designed to reduce the amount of light that spills back behind the streetlight pole and onto adjacent properties. The LEDs allow colors to appear more

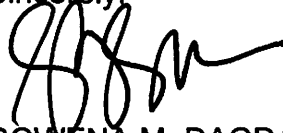
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natural at night, improving color rendering and visibility compared to the current HPS bulbs, improving safety for both pedestrians and vehicles.

We are soliciting your comments and applicable agency requirements for the project to assist us in completing this environmental review. We greatly appreciate your cooperation in providing us with written comments by Friday, September 20, 2019, addressed to the County of Maui, Department of Public Works at the address shown above.

Should you have any questions regarding this matter, please call me at (808) 270-7845.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rowena M. Dagdag-Andaya', with a long horizontal flourish extending to the right.

ROWENA M. DAGDAG-ANDAYA
Director of Public Works

RMDA/MJB/KW:jso

cc: Brian Bilberry, Deputy Corporation Counsel (electronic)
DPW Traffic Section (electronic)

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