

MICHAEL P. VICTORINO  
Mayor

ROWENA M. DAGDAG-ANDAYA  
Acting Director

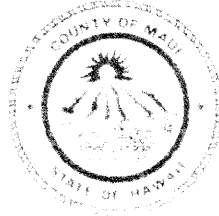
Deputy Director

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

RODRIGO "CHICO" RABARA, P.E.  
Engineering Division

JOHN R. SMITH, P.E.  
Highways Division

Telephone: (808) 270-7845  
Fax: (808) 270-7955



RECEIVED

2019 APR -5 AM 11: 56

OFFICE OF THE  
COUNTY COUNCIL

COUNTY OF MAUI  
**DEPARTMENT OF PUBLIC WORKS**  
200 SOUTH HIGH STREET, ROOM 434  
WAILUKU, MAUI, HAWAII 96793

April 5, 2019

Ms. Michele M. Yoshimura *MJY*  
Budget Director, County of Maui  
200 South High Street  
Wailuku, Maui, Hawaii 96793

APPROVED FOR TRANSMITTAL

*Michael P. Victorino* 4/5/19  
\_\_\_\_\_  
Mayor Date

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

For Transmittal to:

Honorable Keani Rawlins-Fernandez, Chair  
Economic Development and Budget Committee  
Maui County Council  
200 South High Street  
Wailuku, Maui, Hawaii 96793

Dear Chair Rawlins-Fernandez:

**SUBJECT: FISCAL YEAR ("FY") 2020 BUDGET (PW-1) (EDB-1)**

The Department of Public Works responds to your letter dated March 25, 2019 regarding its Pavement Preservation Section as follows:

1. *If the Department receives all proposed funding requests for this Section, please estimate the number of days the Section's employees will work on repaving or treating roadways.*

Pavement Preservation includes various roadway preparatory work and a few types of applications or treatments. Road prep work includes pothole patching, routing and filling of cracks, grinding down high spots/bumps, removing vegetation growth and cleaning the roads.

Ms. Michele M. Yoshimura  
Honorable Michael P. Victorino  
For Transmittal to:  
Honorable Keani Rawlins-Fernandez, Chair  
April 5, 2019  
Page 2

Standard Treatments include seal coats, slurry seal, microsurfacing and thin overlays using hot mix asphalt (HMA). These treatments are intended to extend the life of the existing pavement, but not necessarily the structural capacity of the roadway. Please note that resurfacing (mill and fill) and pavement reconstruction (full depth removal and replacement) are considered beyond simple pavement preservation techniques and are not truly comparable to the pavement preservation treatments.

The Pavement Preservation Section consists of a supervisor, a working foreman, an equipment operator and two laborers (five total employees on the road and one mechanic to repair and service equipment in the shop). These employees are entirely dedicated to pavement preservation tasks each working day. The exception is during storm events when the pavement preservation crews assist the Highways crews with disaster response and clean up.

Because the Pavement Preservation Section only has five positions dedicated to pavement preservation tasks, all projects completed by this section are supplemented heavily by laborers and operators from our six Highways Districts. Each project is coordinated by the Pavement Preservation manager through the Highways Administration and in coordination with roads identified for treatments by our Engineering Division. Pavement Preservation activities by Highways Division essentially acts as a stop-gap measure to extend the remaining service life of a roadway.

2. *Provide the total number of lane miles in each community plan area.*

Please refer to the table in the response to Question No. 3.

3. *Provide a breakdown, by community plan area, of the number of lane miles anticipated to be repaved or treated from FY 2020 through FY 2024. Describe how roads are prioritized and selected to be repaved or treated. Please refer to the table below which reports the approximate lane mileage per community plan area and anticipated values for FY 2020 through FY 2024.*

Ms. Michele M. Yoshimura  
 Honorable Michael P. Victorino  
 For Transmittal to:  
 Honorable Keani Rawlins-Fernandez, Chair  
 April 5, 2019  
 Page 3

Community Plan District	Total Lane Miles Per District	Lane miles to be treated from FY20-24
Makawao/Pukalani/Kula	298 lane miles	9.2 lane miles
Wailuku/Kahului	248 lane miles	9.3 lane miles
South Maui	128 lane miles	8.9 lane miles
Paia/Haiku	117 lane miles	6.2 lane miles
Molokai	96 lane miles	3.5 lane miles
Hana	94 lane miles	10.0 lane miles
West Maui	67 lane miles	8.5 lane miles
Lanai	42 lane miles	4.5 lane miles
TOTAL	1,090 lane miles	60.1 lane miles

To aid in prioritizing roadway projects, DPW uses a consultant and web-based application called iWorQ. iWorQ evaluates the pavement conditions throughout Maui County and provides a pavement preservation treatment recommendation for each road. The information is organized in the application, which allows DPW to create lists sorted by roads, districts, and recommended treatments.

For additional information on how the Department selects and prioritizes roads for repaving and treatment services, please see the Department's response to questions from the Water and Infrastructure Committee (WAI - 30 (3)). This is provided as **Attachment "A"**.

4. *Explain whether employee benefits are factored in when the Department compares in-house costs versus costs of contracting per ton for repaving and treatment services. If they are not, please provide a cost-per-ton comparison of the in-house cost versus contracting cost for repaving and treatment services, with employee benefits included in your in-house cost calculation.*

See **Attachment "B"** for a comparison on recently concluded in-house pavement preservation activities which include overhead charges and direct costs.

Repaving work that is subcontracted by our Engineering Division requires additional equipment and staffing to complete in comparison to the thin overlays that are completed by our Highways Division staff.

Ms. Michele M. Yoshimura  
Honorable Michael P. Victorino  
For Transmittal to:  
Honorable Keani Rawlins-Fernandez, Chair  
April 5, 2019  
Page 4

The Engineering Division develops detailed plans to mill out specific depths of old pavement, repair water and sewer manhole covers, adjusts ADA ramps, revise striping and crosswalks with consideration of complete streets, widens shoulders, and rebuild speed humps. These projects are typically much larger (i.e., more lane miles) than the Highways Division has the capacity to complete. It should also be understood that the prep work for seal coating or slurry sealing a road is highly dependent on the condition of the road prior to the treatment. For a large portion of Maui neighborhoods, the labor intensive prep work can be more expensive than the treatment itself.

Considering the cost effectiveness of the Highways Division's work with slurry seal, we believe it is imperative to continue support of the pavement preservation program. Proactively extending the life of our existing pavements is key in reducing road reconstruction costs in the future and providing improved safety and mobility.

5. *How does the Department determine if a project will be conducted in-house or contracted out?*

Preservation treatments such as seal coats, slurry seals and thin overlays are performed in-house by the Highways Division and are intended to extend road life between five to seven years.

Road projects that involve mill and fill, rehabilitation, and reconstruction work that require more comprehensive improvements, additional labor and equipment are planned and managed by the Engineering Division with the actual work being contracted out to private companies.

Thank you for the opportunity to provide you with this information. Should you require additional information, please feel free to contact me at Ext. 7845.

Sincerely,



ROWENA M. DAGDAG-ANDAYA  
Acting Director of Public Works

RMDA:jso  
Attachments

s:\rowena\transmittals\krawlins-fernandez\_fy 2020 budget pw-1 edb-1 04.03.19

MICHAEL P. VICTORINO  
Mayor  
ROWENA M. DAGDAG-ANDAYA  
Acting Director

Deputy Director  
GLEN A. UENO, P.E., L.S.  
Development Services Administration  
RODRIGO "CHICO" R. RABARA, P.E.  
Engineering Division  
JOHN R. SMITH, P.E.  
Highways Division  
Telephone: (808) 270-7745  
Fax: (808) 270-6267

COUNTY OF MAUI  
**DEPARTMENT OF PUBLIC WORKS**  
**ENGINEERING DIVISION**  
200 SOUTH HIGH STREET, ROOM NO. 410  
WAILUKU, MAUI, HAWAII 96793

April 3, 2019

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

For Transmittal to:

Honorable Alice L. Lee, Chair  
Maui County Council  
Water and Infrastructure Committee  
200 South High Street  
Wailuku, Hawaii 96793

Dear Chair Lee:

**SUBJECT: DEPARTMENT OF PUBLIC WORKS  
FISCAL YEAR 2020 PRE-BUDGET PRESENTATION  
(WAI-30(3))**

This letter is in response to your March 21, 2019 letter requesting information on the prioritization of road repair, pavement preservation, and resurfacing projects.

Road repair projects usually target roads that require the pavement section to be reconstructed or require a combination of resurfacing and pavement reconstruction work, which is called "pavement rehabilitation." If these roads are high vehicular volume collector roads, we check if they are classified for federal funds and program them through the Maui Metropolitan Organization (Maui MPO) to be included on the Transportation Improvement Program (TIP) list for federal construction funds. Federal-aid projects are 80% federally funded to the County's 20% share. Resurfacing projects can also be a federal-aid project if the road is classified for federal funds.

To help us prioritize resurfacing projects and create a resurfacing schedule, we use a web-based application called iWorQ. All roads on Maui, Molokai, and Lanai are evaluated every 5 years and have recommended treatments (i.e., resurfacing, slurry, patching, etc.). This application allows us to create lists that sort roads by districts and recommended treatments. From there, further evaluation is conducted to prioritize road projects:

- A road recommended for resurfacing will be evaluated based on traffic volume and road classification. For example, priority is given to high volume collector roads over low volume minor residential streets.

ATTACHMENT " A "

RECEIVED

2019 APR -4 AM 9: 58

OFFICE OF THE MAYOR

COUNTY OF MAUI  
PUBLIC WORKS

2019 APR -5 AM 9: 58

RECEIVED

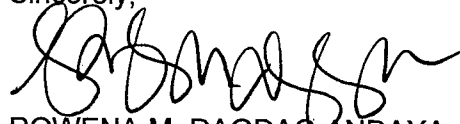
APPROVED FOR TRANSMITTAL

Michael P Victorino 4/4/19  
Mayor Date

- Upcoming development projects or utility projects are also considered. We try our best to defer resurfacing projects until these projects are completed.
- Our Highways Division also acts as our eyes by monitoring road conditions and will provide recommendations if needed.
- In-house field investigations are done to verify roadway conditions with complaints taken into consideration and evaluated for need.
- Coordination is done with our Highways Division to ensure in-house resurfacing work and CIP resurfacing project efforts are not duplicated. Pavement preservation work, such as crack sealing, seal coating, slurry sealing, and thin asphalt overlays, is handled by our Highways Division.
- Input from the Administration, Council, and Mayor are also considered.

We trust this summary answers your questions. If you have any additional questions, please feel free to call our office at 270-7845.

Sincerely,



ROWENA M. DAGDAG-ANDAYA  
Acting Director of Public Works

RDA:wyk(ED19-0484)

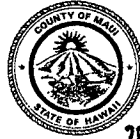
S:\ENG\DESIGN\MISC\Council Response\2019.04.03 ED19-0484 (A.Lee-resurfacing & pavt preservation).docx

Council Chair  
Kelly T. King

Vice-Chair  
Keani N.W. Rawlins-Fernandez

Presiding Officer Pro Tempore  
Tasha Kama

Councilmembers  
Riki Hokama  
Alice L. Lee  
Michael J. Molina  
Tamara Paltin  
Shane M. Sinenci  
Yuki Lei K. Sugimura



RECEIVED

Director of Council Services  
Maria E. Zielinski

2019 MAR 22 AM 10:09

COUNTY COUNCIL

RUSH **249**

COUNTY OF MAUI  
200 S. HIGH STREET  
WAILUKU, MAUI, HAWAII 96793  
[www.MauiCounty.us](http://www.MauiCounty.us)

DEPT. OF  
PUBLIC  
WORKS

March 21, 2019

	INFO	ACTION	SEE ME	COMMENTS	COPY	SCAN	FILE
DIRECTOR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
DEPUTY DIR.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
FISCAL ANALYST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
PERSONNEL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
DSA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
ENGR.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<b>8/24</b>
HWY.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
SECTY.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Return to \_\_\_\_\_, Due \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_

Mr. David Goode, Interim Director  
Department of Public Works  
County of Maui  
Wailuku, Hawaii 96793

Dear Mr. Goode:

**SUBJECT: DEPARTMENT OF PUBLIC WORKS, FISCAL YEAR  
2020 PRE-BUDGET PRESENTATION (WAI-30(3))**

At its March 11, 2019 meeting, the Water and Infrastructure Committee received a presentation from the Department of Public Works on its programs, projects, priorities, and goals as it pertains to the Fiscal Year 2020 Budget.

During its discussion, the Committee inquired about how road repair, pavement preservation, and resurfacing funds are prioritized. Please describe how the Department prioritizes road repair, pavement preservation, and resurfacing projects.

A written response by April 5, 2019 would be appreciated. To ensure efficient processing, please include the relevant Committee item number in the subject line of your response.

Should you have any questions, please contact me or the Committee staff (Traci Fujita at ext. 7687, or Rayna Yap at ext. 8007).

Sincerely,

ALICE L. LEE, Chair  
Water and Infrastructure Committee

wai:ltr:030(3)apw01:tnf

cc: Mayor Michael P. Victorino

DPW PAVEMENT PRESERVATION, 2nd and 3rd Quarters FY2019						
TREATMENT	SLURRY	SLURRY	SLURRY	SLURRY	SLURRY	THIN OVERLAY
LOCATION	Maui Uplands, Makawao	Maui Meadows, Kihei	Koele Street, Lanai	Molokai	Contracted Project, Kahului	Pulehu Road Upcountry
LANE FEET	12,936	16,844	825	16,508		3,320
LANE MILES	2.45	3.19	0.16	3.13	6.50	0.63
SY	17,216	22,459	1,467	24,433	42,000	4,427
<b>SLURRY PROJECTS:</b>						
<b>SLURRY OPERATIONS</b>						
LABOR	\$ 17,879	\$ 11,386	\$ 2,021	\$ 19,961		
LABOR + 94.79%	\$ 34,827	\$ 22,179	\$ 3,937	\$ 38,882		
EQUIPMENT	\$ 14,001	\$ 9,200	\$ 1,287	\$ 6,568		
MATERIALS	\$ 32,265	\$ 29,510	\$ 4,140	\$ 68,224		
EQUIPMENT SHIPPING				\$ 14,000		
TOTAL	\$ 81,093	\$ 60,889	\$ 9,364	\$ 127,674	\$ 362,245	
\$/SY	\$ 4.71	\$ 2.71	\$ 6.38	\$ 5.23	\$ 8.62	
* Contracted work includes pavement markings						
<b>PAVEMENT MARKING</b>						
LABOR	\$ 6,688	\$ 16,856				
LABOR + 94.79%	\$ 13,028	\$ 32,834				
EQUIPMENT	\$ 1,897	\$ 4,629				
MATERIALS	\$ 7,755	\$ 16,617				
TOTAL	\$ 22,680	\$ 54,080	\$ 1,936	\$ 32,252		
\$/SY	\$ 1.32	\$ 2.41	\$ 1.32	\$ 1.32		
*Striping costs are estimated for Lanai and Molokai						
Engineering & Const. Mgmt.	\$ -	\$ -	\$ -	\$ -	\$ 40,000	
TOTAL \$	\$ 103,772	\$ 114,969	\$ 11,300	\$ 159,926	\$ 402,245	
\$/SY	\$ 6.03	\$ 5.12	\$ 7.70	\$ 6.55	\$ 9.58	
\$/LN MILE	\$ 42,355.94	\$ 36,040.31	\$ 72,320.93	\$ 51,151.39	\$ 61,883.85	
<b>OVERLAY PROJECTS:</b>						
LABOR						\$ 3,765
LABOR + 94.79%						\$ 7,334
EQUIPMENT						\$ 15,868
MATERIALS						\$ 32,996
TOTAL						\$ 56,198
\$/SY						\$ 12.69
\$/LN MILE						\$ 89,375.26
\$/Ton						\$ 133.17
Contracted \$/Ton from Engineering Projects						\$ 120.00
Design Engineering and Construction Management						\$ 12.00
Total contracted \$/ton, including Eng. And CM						\$ 132.00
*Engineering costs are rough estimates and can vary widely depending on factors such as the vendors involved, job location, job size, road condition, time constraints/scheduling, and terrain.						

ATTACHMENT " B "