



# Federal Lands Highway Road Inventory Program

Road Inventory and Condition Assessment



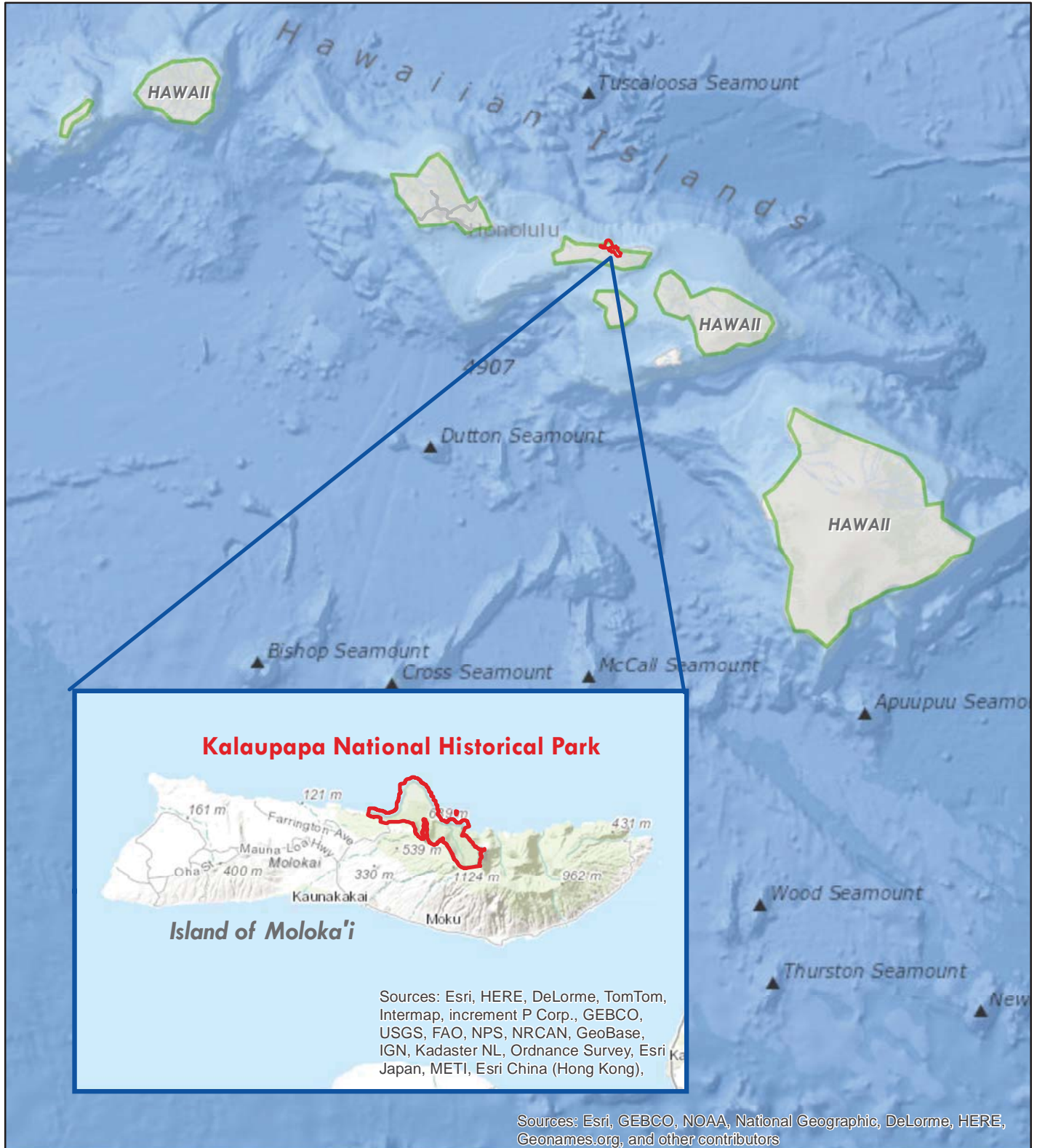
**Kalaupapa National Historical Park**

**KALA**

**Cycle 5 Report**

**Prepared By: Federal Highway Administration  
Road Inventory Program (RIP)  
Data Collected: 04/2014  
Report Date: 08/2014**

# Kalaupapa National Historical Park in Hawaii





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# Section 1 Introduction



## Kalaupapa National Historical Park



Federal Lands Highway  
Road Inventory Program



## INTRODUCTION

The Federal Highway Administration, (FHWA), in the mid 1970s, was charged with the task of identifying surface condition deficiencies and corrective priorities on National Park Service (NPS) roads and parkways. Additionally, FHWA was tasked with establishing an integrated maintenance features inventory, locating features such as culverts, guardrails, and signs, among others, along NPS roads and parkways. As a result, in 1976 the NPS and FHWA entered into an MOA (Memorandum Of Agreement) which established the RIP (Road Inventory Program). This MOA was terminated and revised in 1980 to establish a new MOA aiming to update RIP data and develop a long-range program to improve and maintain NPS roads to designated condition standards and establish a maintenance management program.

The FHWA completed this initial phase of the RIP in the early 1980s. As a result of this effort, each NPS site included in the study received a RIP Report known as the “Brown Book” which included the information collected during this first RIP phase.

In the 1990s, the effort was again renewed to update and maintain the RIP data. By this time the computer age was upon us and a process was employed that relied heavily on electronic data collection and computer technology. A cyclical program was developed and the RIP completed two cycles of data collection from 1994 to 2001. Cycle 1, starting in 1994, was conducted in 44 “large parks” (parks containing 10 or more paved route miles). Cycle 2 began in 1997 and comprised 79 large parks and 5 small parks totaling 4,874 paved route miles. Each of these parks received a RIP Report known as the “Blue Book”. Cycle 3, from 2001 to 2004, was conducted in all parks, large and small, that contained any paved routes, including parking areas and, again, each park received a RIP Report and associated electronic files.

Cycle 4 was initiated in the spring of 2006 covering 86 large parks and several associated small parks consisting of 5,553 paved route miles and 6,232 paved parking areas. Data collection has been completed for Cycle 4 and all data has been delivered to the NPS.

In 2005, the FHWA began implementing the use of a Pavement Management System (PMS) to assist the NPS in prioritizing Pavement Maintenance and Rehabilitation activities. The PMS used by FHWA is the Highway Pavement Management Application (HPMA) and this software has the ability to store inventory and condition data from RIP and forecast future performance using prediction models. Outputs include performance and condition reports at the National, Regional, Park, or Route level. A regional prioritized list and optimization have been produced for most regions and the Federal Highway Deferred Maintenance is calculated via the HPMA.

In an effort to improve the accuracy of treatment recommendations and pavement condition descriptions, an extensive study was completed throughout 2010 that has resulted in changes to the RIP condition reporting method, specifically the distresses and indexes that comprise the Pavement Condition Rating (PCR). It was determined that a better representation of PCR could

be achieved by modifying the relative impact certain distresses would have on the overall rating. The changes that were implemented were endorsed by management at both the FHWA and NPS in October 2010. These changes will allow greater use of RIP and HPMA data for not simply condition data reporting, but also as a reliable tool for project identification and selection. Because of these changes, the PCR Condition ratings reported in Cycle 5 do not directly relate to the condition ratings reported in previous cycle RIP Reports. For more detailed information about the changes, see Section 3 and Section 10 in this RIP Report.

Cycle 5 has launched in the summer of 2010 and will again comprise all parks, large and small, that are served by paved roads and/or parking areas. For Cycle 5, the decision was made to collect condition data in large parks on Functional Class 1, 2, and 7 paved routes only, as well as any new routes that were previously not collected. In small parks, all paved routes and parking areas will be collected. As a result, this will include 81 large parks with 4,459 paved route miles and 231 small parks with 529 paved route miles and associated paved parking areas.

Since 1984, the Road Inventory Program has been funded through the Federal Lands Highway Park Roads and Parkways (PRP) Program. Currently, coordination of the RIP with FLH is under the NPS Washington Headquarters Park Facility Management Division. The FLH Washington office coordinates policy and prepares national reports and needs assessment studies for Congress.

In 1998, the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) amended Title 23 U.S.C., and inserted Section 204(a)(6) requiring the FHWA and NPS, to develop by rule, a Pavement Management System (PMS) applied to park roads and parkways serving the National Park System.

FLH is responsible for the accuracy of all data presented in this report. Any questions or comments concerning the contents of this report should be directed to the national RIP Coordinator located in Sterling, Virginia.

Respectfully,

FHWA RIP Team

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## Section 2 Park Route Inventory



### Kalaupapa National Historical Park



Federal Lands Highway  
Road Inventory Program

# Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 08/27/2014

(Numerical By Route #)

Page 1 of 5

Shading Color Key:

Red text denotes approx. mileage

White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

■ = Concession Route Flag ON

\*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

\*\* DCV - Data Collection Vehicle

NC - Not Collected

## KALA

## KALAUPAPA NATIONAL HISTORICAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name        | Route Description<br>From To   | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|-------------------|--|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0010ZZ   | 5               | 239507   |               | KAMEHAMEHA STREET | FROM KALAUPAPA AIRPORT PARKING LOT (STATE DOT) TO BEGINNING OF ROUTE 0012 (DAMIEN STREET) AND BEGINNING OF ROUTE 0013 (BERETANIA STREET)                                   | N/A             | 1.59        | 0.00           | 1.59               | 1           | 124,772            | AS         | 1, 1A     |
| 0011     | 5               | 80824    |               | PUAHI STREET      | FROM ROUTE 0010ZZ (KAMEHAMEHA STREET) TO END OF WAIHANAU BRIDGE (8896-001) / BEGINNING OF ROUTE 0402 (TRAIL ACCESS ROAD)   | N/A             | 0.44        | 0.00           | 0.44               | 1           | 27,878             | AS         | 1, 1A     |
| 0012     | 5               | 239692   |               | DAMIEN STREET     | FROM END OF ROUTE 0010ZZ (KAMEHAMEHA STREET) TO BEGINNING OF ROUTE 0020 (KAPIOLANI STREET)   | N/A             | 0.47        | 0.00           | 0.47               | 1           | 35,600             | AS         | 1, 1A     |
| 0013     | 5               | 239691   |               | BERETANIA STREET  | FROM INTERSECTION OF ROUTE 0012 (DAMIEN STREET) AND ROUTE 0010ZZ (KAMEHAMEHA STREET) TO ROUTE 0020 (KAPIOLANI STREET) AND BEGINNING OF ROUTE 0400 (DAMIEN ROAD) AT MP 0.40 | N/A             | 0.33        | 0.07           | 0.40               | 1           | 26,374             | AS         | 1, 1A     |
| 0014ZZ   | 5               | 239693   |               | MISSION STREET    | FROM ROUTE 0013 (BERETANIA STREET) TO ROUTE 0012 (DAMIEN STREET)   | N/A             | 0.17        | 0.00           | 0.17               | 1           | 13,147             | AS         | 1, 1A     |
| 0015     | 5               | 239699   |               | GOODHUE STREET    | FROM ROUTE 0013 (BERETANIA STREET) TO ROUTE 0023 (SCHOOL STREET)   | N/A             | 0.09        | 0.00           | 0.09               | 1           | 5,766              | AS         | 1, 1A     |
| 0016     | 5               | 239700   |               | BISHOP STREET     | FROM ROUTE 0013 (BERETANIA STREET) TO ROUTE 0023 (SCHOOL STREET)   | N/A             | 0.08        | 0.00           | 0.08               | 1           | 4,815              | AS         | 1, 1A     |
| 0017     | 5               | 239694   |               | MCKINLEY STREET   | FROM ROUTE 0013 (BERETANIA STREET) TO ROUTE 0012 (DAMIEN STREET)   | N/A             | 0.26        | 0.00           | 0.26               | 1           | 16,284             | AS         | 1, 1A     |
| 0018     | 5               | 239695   |               | BALDWIN STREET    | FROM ROUTE 0013 (BERETANIA STREET) TO ROUTE 0012 (DAMIEN STREET)   | N/A             | 0.27        | 0.00           | 0.27               | 1           | 17,556             | AS         | 1, 1A     |
| 0019     | 5               | 239696   |               | KAIULANI STREET   | FROM ROUTE 0013 (BERETANIA STREET) TO ROUTE 0012 (DAMIEN STREET)   | N/A             | 0.27        | 0.00           | 0.27               | 1           | 17,361             | AS         | 1, 1A     |
| 0020     | NC              | 239697   |               | KAPIOLANI STREET  | FROM ROUTE 0013 (BERETANIA STREET) ON RIGHT AND ROUTE 0400 (DAMIEN ROAD) ON LEFT TO END OF ROUTE 0012 (DAMIEN STREET)  | N/A             | 0.00        | 0.29           | 0.29               | 1           |                    | GR         |           |
| 0021     | 5               | 239698   |               | BAYVIEW LOOP      | FROM ROUTE 0012 (DAMIEN STREET) TO ROUTE 0011 (PUAHI STREET)   | N/A             | 0.16        | 0.00           | 0.16               | 1           | 12,514             | AS         | 1, 1A     |
| 0022     | 5               | 239704   |               | HALEAKALA STREET  | FROM ROUTE 0017 (MCKINLEY STREET) TO ROUTE 0020 (KAPIOLANI STREET) AT MP 0.13  | N/A             | 0.07        | 0.06           | 0.13               | 1           | 4,435              | AS         | 1, 1A     |



# Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 08/27/2014

(Numerical By Route #)

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Shading Color Key:

Red text denotes approx. mileage

White = Paved Routes, DCV Driven

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= Concession Route Flag ON

\*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

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NC - Not Collected

## KALA

## KALAUPAPA NATIONAL HISTORICAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name                                  | Route Description<br>From  | To                                     | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|---|--|--|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0023     | 5               | 239706   |               | SCHOOL STREET                               | FROM ROUTE 0012 (DAMIEN STREET)  | TO ROUTE 0017 (MCKINLEY STREET)        | N/A             | 0.23        | 0.00           | 0.23               | 1           | 16,613             | AS         | 1, 1A     |
| 0024     | 5               | 239707   |               | KILOHANA STREET                             | FROM ROUTE 0010ZZ (KAMEHAMEHA STREET)  | TO ROUTE 0011 (PUAHI STREET)           | N/A             | 0.06        | 0.00           | 0.06               | 1           | 3,612              | AS         | 1, 1A     |
| 0025ZZ   | 5               | 239705   |               | BISHOP ROAD                                 | FROM INTERSECTION OF ROUTE 0011 (PUAHI STREET) AND ROUTE 0023 (SCHOOL STREET)        | TO BISHOP HOME FOR GIRLS               | N/A             | 0.27        | 0.00           | 0.27               | 1           | 20,869             | AS         | 1, 1A     |
| 0026ZZ   | 5               | 239708   |               | CONRADY PLACE AND MISSION / PUAHI CONNECTOR | FROM ROUTE 0011 (PUAHI STREET)   | TO ROUTE 0012 (DAMIEN STREET)          | N/A             | 0.08        | 0.00           | 0.08               | 1           | 8,882              | AS         | 1, 1A     |
| 0028     | 5               | 239701   |               | STAFF STREET (STAFF ROW)                    | FROM ROUTE 0013 (BERETANIA STREET)   | TO END OF PAVEMENT                     | N/A             | 0.26        | 0.00           | 0.26               | 1           | 24,235             | AS         | 1, 1A     |
| 0030     | 5               |          |               | MCVEIGH STREET A                            | FROM ROUTE 0028 (STAFF STREET (STAFF ROW))   | TO END OF PAVEMENT                     | N/A             | 0.05        | 0.00           | 0.05               | 1           | 3,421              | AS         | 1, 1A     |
| 0031     | 5               |          |               | MCVEIGH STREET B                            | FROM ROUTE 0028 (STAFF STREET (STAFF ROW))   | TO END OF PAVEMENT                     | N/A             | 0.06        | 0.00           | 0.06               | 1           | 3,675              | AS         | 1, 1A     |
| 0032     | 5               |          |               | MCVEIGH STREET C                            | FROM ROUTE 0028 (STAFF STREET (STAFF ROW))   | TO ROUTE 0035 (MCVEIGH STREET F)       | N/A             | 0.04        | 0.00           | 0.04               | 1           | 2,788              | AS         | 1, 1A     |
| 0033     | 5               |          |               | MCVEIGH STREET D                            | FROM ROUTE 0028 (STAFF STREET (STAFF ROW))   | TO END OF PAVEMENT                     | N/A             | 0.05        | 0.00           | 0.05               | 1           | 3,421              | AS         | 1, 1A     |
| 0034     | 5               |          |               | MCVEIGH STREET E                            | FROM ROUTE 0031 (MCVEIGH STREET B)   | TO ROUTE 0032 (MCVEIGH STREET C)       | N/A             | 0.03        | 0.00           | 0.03               | 1           | 1,584              | AS         | 1, 1A     |
| 0035     | 5               |          |               | MCVEIGH STREET F                            | FROM ROUTE 0031 (MCVEIGH STREET B)   | TO ROUTE 0032 (MCVEIGH STREET C)       | N/A             | 0.03        | 0.00           | 0.03               | 1           | 1,647              | AS         | 1, 1A     |
| 0400     | NC              | 80818    |               | DAMIEN ROAD                                 | FROM END OF ROUTE 0013 (BERETANIA STREET) AND ROUTE 0020 (KAPIOLANI STREET) ON RIGHT | TO END OF LOOP AT KALAWAO PARK         | N/A             | 0.00        | 2.66           | 2.66               | 1           |                    | GR         |           |
| 0401     | NC              | 80312    |               | COASTAL ROAD                                | FROM KALAUPAPA AIRPORT PARKING LOT (STATE DOT)                                       | TO ROUTE 0400 (DAMIEN ROAD)            | N/A             | 0.00        | 3.61           | 3.61               | 4           |                    | GR         |           |
| 0402     | NC              | 80826    |               | TRAIL ACCESS ROAD                           | FROM END OF ROUTE 0011 (PUAHI STREET) / WAIHANAU BRIDGE                              | TO KALAUPAPA TRAIL TO TOPSIDE MOLOKA'I | N/A             | 0.00        | 0.31           | 0.31               | 4           |                    | NV         |           |

# Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 08/27/2014

(Numerical By Route #)

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## KALA

## KALAUAPA NATIONAL HISTORICAL PARK

| Rte. No. | Cycle Collected | FMSS No. | Concess Route | Route Name                      | Route Description<br>From                  | To   | Maint. District | Paved Miles | Un-Paved Miles | Total Route Length | Func. Class | Manual Rated SQ/FT | Surf. Type | Area Maps |
|----------|-----------------|----------|---------------|---------------------------------|--|--|-----------------|-------------|----------------|--------------------|-------------|--------------------|------------|-----------|
| 0403     | NC              | 80817    |               | CRATER ROAD                     | FROM ROUTE 0400 (DAMIEN ROAD)              | TO END OF LOOP                               | N/A             | 0.00        | 0.41           | 0.41               | 4           |                    | GR         |           |
| 0404     | NC              | 80821    |               | INTERIOR ROAD TO KAUHAKO CRATER | FROM ROUTE 0403 (CRATER ROAD)              | TO DEAD END AT KAUHAKO CRATER                | N/A             | 0.00        | 0.06           | 0.06               | 4           |                    | GR         |           |
| 0405     | NC              | 80822    |               | LIGHTHOUSE ROAD                 | FROM ROUTE 0010ZZ (KAMEHAMEHA STREET)      | TO ROUTE 0401 (COASTAL ROAD) NEAR LIGHTHOUSE | N/A             | 0.00        | 0.30           | 0.30               | 4           |                    | NV         |           |
| 0406     | NC              | 80814    |               | BEACH HOUSE ROAD                | FROM ROUTE 0010ZZ (KAMEHAMEHA STREET)      | TO ROUTE 0010ZZ (KAMEHAMEHA STREET)          | N/A             | 0.00        | 0.47           | 0.47               | 4           |                    | NV         |           |
| 0407     | NC              | 239703   |               | STAFF LOOP                      | FROM ROUTE 0028 (STAFF STREET (STAFF ROW)) | TO ROUTE 0013 (BERETANIA STREET)             | N/A             | 0.00        | 0.16           | 0.16               | 4           |                    | NV         |           |
| 0408     | NC              |          |               | JEEP ROAD 1                     | FROM ROUTE 0400 (DAMIEN ROAD)              | TO ROUTE 0401 (COASTAL ROAD)                 | N/A             | 0.00        | 2.18           | 2.18               | 4           |                    | NV         |           |
| 0409     | NC              |          |               | JEEP ROAD 2                     | FROM ROUTE 0408 (JEEP ROAD 1)              | TO ROUTE 0408 (JEEP ROAD 1)                  | N/A             | 0.00        | 0.84           | 0.84               | 4           |                    | NV         |           |
| 0410     | NC              | 80819    |               | FENCE LINE ROAD                 | FROM ROUTE 0400 (DAMIEN ROAD)              | TO ROUTE 0020 (KAPIOLANI STREET)             | N/A             | 0.00        | 0.35           | 0.35               | 5           |                    | NV         |           |
| 0411     | 5               |          |               | INDUSTRIAL ROAD                 | FROM ROUTE 0011 (PUAHI STREET)             | TO ROUTE 0013 (BERETANIA STREET)             | N/A             | 0.12        | 0.00           | 0.12               | 5           | 9,108              | AS         | 1, 1A     |
| 0412     | NC              |          |               | PUMP HOUSE ROAD                 | FROM ROUTE 0400 (DAMIEN ROAD)              | TO END AT PUMP HOUSE                         | N/A             | 0.00        | 0.55           | 0.55               | 6           |                    | GR         |           |
| 0900     | 5               |          |               | PASCHOAL HALL PARKING           | ADJACENT TO ROUTE 0013 (BERETANIA STREET)  |  | N/A             | 0.00        | 0.00           | 0.00               |             | 2,991              | AS         | 1, 1A     |

# Cycle 5 NPS/RIP Route ID Report

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|                                     |  |                                |                                   |
|-------------------------------------|--|--------------------------------|-----------------------------------|
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## CYCLE 5 SUMMARY TOTALS FOR KALAUPAPA NATIONAL HISTORICAL PARK

| CYCLE 5 ROUTE TOTALS                               |              | CYCLE 5 CONCESSION TOTALS                 |             |
|--|--------------|---|-------------|
| DCV Driven Route Miles                             | 0.00         | Concession Paved Route Miles              | 0.00        |
| Manually Rated Route Miles                         | 5.44         | Concession Unpaved Route Miles            | 0.00        |
| <b>TOTAL PARK ROUTE MILES COLLECTED IN CYCLE 5</b> | <b>5.44</b>  | <b>TOTAL CONCESSION ROUTE MILES</b>       | <b>0.00</b> |
| Manually Rated Routes (SQFT)                       | 0.00         | Concession Paved Parking Area SQFT        | 0           |
| <b>TOTAL UNPAVED PARK ROUTE MILES</b>              | <b>12.32</b> | Concession Unpaved Parking Area SQFT      | 0           |
|  |              | <b>TOTAL CONCESSION PARKING AREA SQFT</b> | <b>0</b>    |
|  |              | Concession Manually Rated Routes SQFT     | 0           |
| * CYCLE 5 PARKING AREA TOTALS                      |              | CYCLE 5 WEIGHTED AVERAGE PARK VALUES      |             |
| Paved Parking (SQFT)                               | 2,991        | DCV Driven PCR                            | N/A         |
| Unpaved Parking (SQFT)                             | 0            | **Manually Rated Routes PCR               | 98          |
| <b>TOTAL PARKING (SQFT)</b>                        | <b>2,991</b> | **Parking PCR                             | 90          |
|  |              | <b>***Total Equivalent Lane Miles</b>     | <b>7.05</b> |

\* - The Parking Area Totals SQFT value represents all parking areas collected in Cycle 5, both park and concessionaire.

\*\* - Parking and Manually Rated Routes are assigned the following PCR values based on their observed condition: Construction=-1, Excellent=97, Good=90, Fair=73, and Poor=45.

\*\*\* - Equivalent Lane Miles are calculated by route using the following equations : DCV and Manually Rated Lines Routes=( PAVE\_WIDTHxPAVED\_MI)/11 foot lane. Parking Areas=SQ\_FEET/5280/11. Manually Rated Polygons=SQ\_FEET/5280/11.

# Cycle 5 NPS/RIP Route ID Report

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## General Park Road Functional Classification Table

- Class 1** Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 - 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 - 9. State Routes Inventoried for Park. Route Numbers 5000-5999
- Class 2** Connector Park Road (Public Roads) - Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, campgrounds, etc. Route Numbers 100-199.
- Class 3** Special Purpose Park Road (Public Roads) - Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc. These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.
- Class 4** Primitive Park Roads (Public Roads) - Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas. These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299. Note: Functional Classes 3 and 4 have the same route numbers because, historically, they were numbered similarly.
- Class 5** Administrative Access Road (Administrative Roads) - All public roads intended for access to administrative developments or structures such as park offices, employee quarters, or utility areas. Route Numbers 400-499.
- Class 6** Restricted Road (Administrative Roads) - All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. Route Numbers 400-499. Note: Functional Classes 5 and 6 have the same route numbers because historically they were numbered similarly and often there is little distinction between these routes. For example, because utility areas and employee housing are often closed to the public, this restriction would result in classification of FC 6 rather than FC 5.
- Class 7** Urban Parkway (Urban Parkways and City Streets) - These facilities serve high volumes of park and non-park related traffic and are restricted, limited-access facilities in an urban area. This category of roads primarily encompasses the major parkways which serve as gateways to our nation's capital. Other major park roads or portions thereof, however, may be included in this category. Route Numbers 1-9.
- Class 8** City Streets (Urban Parkways and City Streets) - City streets are usually extensions of the adjoining street system that are owned and maintained by the National Park Service. The construction and/or reconstruction should conform with accepted local engineering practice and local conditions. Route Numbers 600-699.

\*\*\*\*\*

A park road system contains those roads within or giving access to a park or other unit of the NPS which are administered by the NPS, or by the Service in cooperation with other agencies. The assignment of a functional classification (FC) to a park road is not based on traffic volumes or design speed, but on the intended use or function of that road or route.

The historic route numbering system also included a 300 number series for interpretive roads, and a 500 series for one-way roads. There are approximately 250 roads nationwide which are designated by the 300 and 500 series. The numbers for these roads will be maintained for reporting consistency. However, since these interpretive and one-way routes are not as clearly tied to a specific functional class, the 300 and 500 series will be discontinued for future use.

5000 route numbers are assigned to Non-NPS Routes that are State, County or City owned which border, traverse, or provide access to Park Facilities or Locations. 5000 Routes are driven for GPS and Video Log only.

## Surface Type Abbreviations:

- AS - Asphaltic Concrete Pavement**
- CO - Portland Cement Concrete Pavement**
- BR - Brick or Pavers Road Bed**
- CB - Cobble Stone Road Bed**
- GR - Gravel Road Bed**
- SA - Sand Road Bed**
- NV - Native or Dirt Material Road Bed**
- OT - Other Materials Road Bed**



# NPS/RIP Subcomponent Details for KALA

Road Inventory Program 08/27/2014

(Numerical By Subcomponent #)

Page 1 of 2

Shading Color Key:  
Red text denotes approx. mileage

White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

■ = Concession Route Flag ON

\*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

## KALA

### KALAUPAPA NATIONAL HISTORICAL PARK

| Rte. No. | FMSS No. | Cycle Collected | Route Description                           |   |   | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---|---|---|---------------|-------------|-------------|----------------|--------------------|--------------------|
|          |          |                 | Route Name                                  | From  | To  |               |             |             |                |                    |                    |
| 0010ZZ   | 239507   | 5               | KAMEHAMEHA STREET                           | FROM KALAUPAPA AIRPORT PARKING LOT (STATE DOT)                                | TO BEGINNING OF ROUTE 0012 (DAMIEN STREET) AND BEGINNING OF ROUTE 0013 (BERETANIA STREET) |               | 1           | 1.59        | 0.00           | 1.59               | 124,772            |
| 0014ZZ   | 239693   | 5               | MISSION STREET                              | FROM ROUTE 0013 (BERETANIA STREET)  | TO ROUTE 0012 (DAMIEN STREET)   |               | 1           | 0.17        | 0.00           | 0.17               | 13,147             |
| 0025ZZ   | 239705   | 5               | BISHOP ROAD                                 | FROM INTERSECTION OF ROUTE 0011 (PUAHI STREET) AND ROUTE 0023 (SCHOOL STREET) | TO BISHOP HOME FOR GIRLS  |               | 1           | 0.27        | 0.00           | 0.27               | 20,869             |
| 0026ZZ   | 239708   | 5               | CONRADY PLACE AND MISSION / PUAHI CONNECTOR | FROM ROUTE 0011 (PUAHI STREET)  | TO ROUTE 0012 (DAMIEN STREET)   |               | 1           | 0.08        | 0.00           | 0.08               | 8,882              |

### KALA-0010ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description   |   |   | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---------------------|---|---|---------------|-------------|-------------|----------------|--------------------|--------------------|
|          |          |                 | Route Name          | From  | To  |               |             |             |                |                    |                    |
| 0010AZ   | 239507   | 5               | KAMEHAMEHA STREET A | FROM ROUTE 0010BZ (KAMEHAMEHA STREET B) AND KALAUPAPA AIRPORT PARKING LOT (STATE DOT) | TO BEGINNING OF ROUTE 0012 (DAMIEN STREET) AND BEGINNING OF ROUTE 0013 (BERETANIA STREET) |               | 1           | 1.53        | 0.00           | 1.53               | 121,414            |
| 0010BZ   | 239507   | 5               | KAMEHAMEHA STREET B | FROM ROUTE 0010AZ (KAMEHAMEHA STREET A)   | TO ROUTE 0010AZ (KAMEHAMEHA STREET A) AND KALAUPAPA AIRPORT PARKING LOT (STATE DOT)       |               | 1           | 0.05        | 0.00           | 0.05               | 3,358              |

### KALA-0014ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description                |                                    |  | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|----------------------------------|------------------------------------|--|---------------|-------------|-------------|----------------|--------------------|--------------------|
|          |          |                 | Route Name                       | From                               | To   |               |             |             |                |                    |                    |
| 0014AZ   | 239693   | 5               | MISSION STREET (MAIN ROAD)       | FROM ROUTE 0013 (BERETANIA STREET) | TO ROUTE 0012 (DAMIEN STREET)                |               | 1           | 0.14        | 0.00           | 0.14               | 11,167             |
| 0014BZ   | 239693   | 5               | MISSION STREET (SOUTH SPUR ROAD) | FROM ROUTE 0012 (DAMIEN STREET)    | TO ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |               | 1           | 0.03        | 0.00           | 0.03               | 1,980              |

# NPS/RIP Subcomponent Details for KALA

Road Inventory Program 08/27/2014

(Numerical By Subcomponent #)

Page 2 of 2

Shading Color Key:

Red text denotes approx. mileage

White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

\*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

## KALA

### KALAUPAPA NATIONAL HISTORICAL PARK

#### KALA-0025ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description        |   | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|--------------------------|---|---------------|-------------|-------------|----------------|--------------------|--------------------|
|          |          |                 | Route Name               | From  |               |             |             |                |                    |                    |
| 0025AZ   | 239705   | 5               | BISHOP ROAD (FRONT LOOP) | FROM INTERSECTION OF ROUTE 0011 (PUAHI STREET) AND ROUTE 0023 (SCHOOL STREET) |               | 1           | 0.15        | 0.00           | 0.15               | 12,632             |
| 0025BZ   | 239705   | 5               | BISHOP ROAD (BACK LOOP)  | FROM ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))                                  |               | 1           | 0.12        | 0.00           | 0.12               | 8,237              |
|          |          |                 |                          | TO END OF LOOP  |               |             |             |                |                    |                    |
|          |          |                 |                          | TO ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))                                    |               |             |             |                |                    |                    |

#### KALA-0026ZZ Subcomponent Breakdown

| Rte. No. | FMSS No. | Cycle Collected | Route Description         |  | Concess Route | Func. Class | Paved Miles | Un-Paved Miles | Total Route Length | Manual Rated SQ/FT |
|----------|----------|-----------------|---------------------------|--|---------------|-------------|-------------|----------------|--------------------|--------------------|
|          |          |                 | Route Name                | From   |               |             |             |                |                    |                    |
| 0026AZ   | 239708   | 5               | MISSION / PUAHI CONNECTOR | FROM ROUTE 0011 (PUAHI STREET)                 |               | 1           | 0.03        | 0.00           | 0.03               | 1,743              |
| 0026BZ   | 239708   | 5               | CONRADY PLACE             | FROM ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |               | 1           | 0.05        | 0.00           | 0.05               | 7,139              |
|          |          |                 |                           | TO ROUTE 0014AZ (MISSION STREET (MAIN ROAD))   |               |             |             |                |                    |                    |
|          |          |                 |                           | TO ROUTE 0012 (DAMIEN STREET)                  |               |             |             |                |                    |                    |

**ROUTE IDENTIFICATION CHANGES FROM PREVIOUS CYCLE**  
Kalaupapa National Historical Park

Kalaupapa National Historical Park (KALA) was collected by RIP for the first time in Cycle 5. Therefore, no route changes table is included in this report.

# Section 3 Park Summary Information



## Kalaupapa National Historical Park



Federal Lands Highway  
Road Inventory Program



## KALA: PAVED ROUTE MILES AND PERCENTAGES BY FUNCTIONAL CLASS AND PCR

| Functional Class | Pavement Condition Rating (PCR) |           |               |              |               |              |                     |               | Total Miles |
|------------------|---------------------------------|-----------|---------------|--------------|---------------|--------------|---------------------|---------------|-------------|
|                  | POOR<br>0-60                    |           | FAIR<br>61-84 |              | GOOD<br>85-94 |              | EXCELLENT<br>95-100 |               |             |
|                  | Miles                           | %         | Miles         | %            | Miles         | %            | Miles               | %             |             |
| 1                |                                 |           | 0.07          | 1.29%        | 0.32          | 5.85%        | 4.94                | 90.84%        | 5.33        |
| 2                |                                 |           |               |              |               |              |                     |               |             |
| 3                |                                 |           |               |              |               |              |                     |               |             |
| 4                |                                 |           |               |              |               |              |                     |               |             |
| 5                |                                 |           |               |              |               |              | 0.11                | 2.02%         | 0.11        |
| 6                |                                 |           |               |              |               |              |                     |               |             |
| 7                |                                 |           |               |              |               |              |                     |               |             |
| 8                |                                 |           |               |              |               |              |                     |               |             |
| <b>Totals</b>    | <b>0</b>                        | <b>0%</b> | <b>0.07</b>   | <b>1.29%</b> | <b>0.32</b>   | <b>5.85%</b> | <b>5.05</b>         | <b>92.86%</b> | <b>5.44</b> |

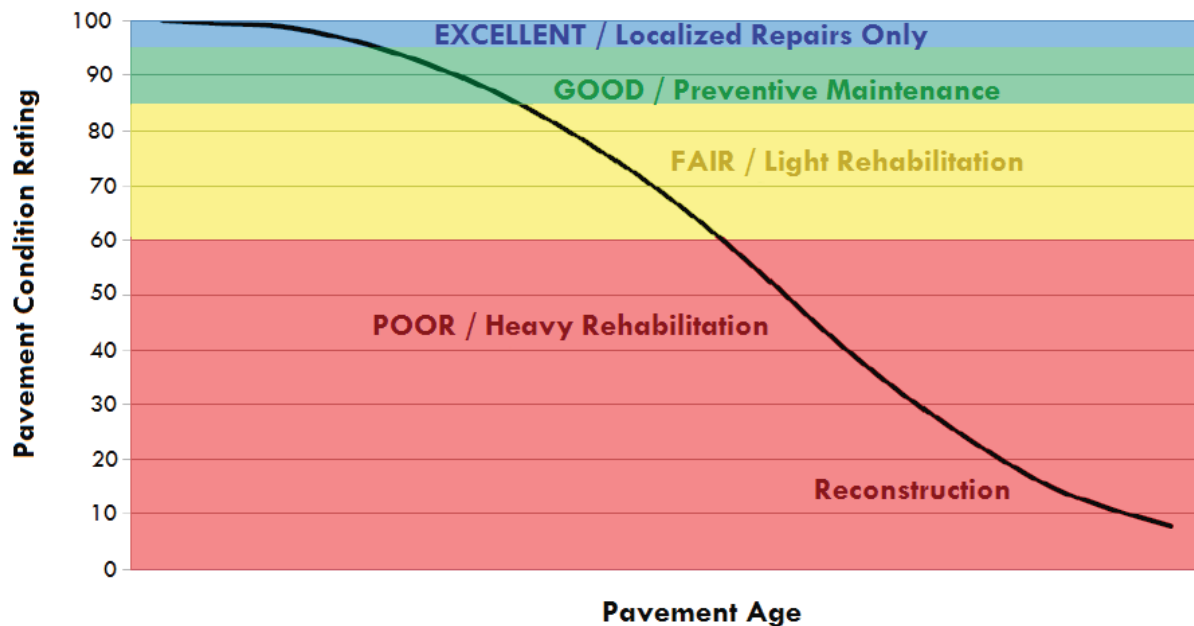
### Explanation of the Excellent, Good, Fair, and Poor Condition Descriptions

In addition to the RIP Index changes that have been implemented in Cycle 5, we will also aim to provide greater assistance in translating excellent/good/fair/poor categories into pavement needs categories. The PCR can be used to indicate the place in the Pavement Life Cycle and the types of treatments that should be considered now and into the future.

- Excellent/New: PCR of 95-100. Pavements in this range will require only spot repairs
- Good: PCR of 85-94. Pavements in this range will likely be candidates for Preventive Maintenance. Examples include Chip and Slurry Seals, Micro Surfacing and Thin Overlays.
- Fair: PCR of 61-84. Pavements in this range will likely be candidates of Light Rehabilitation (L3R). Examples include single-lift overlays up to 2.5 inches in total thickness, milling and overlays.
- Poor: PCR of 0-60. Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

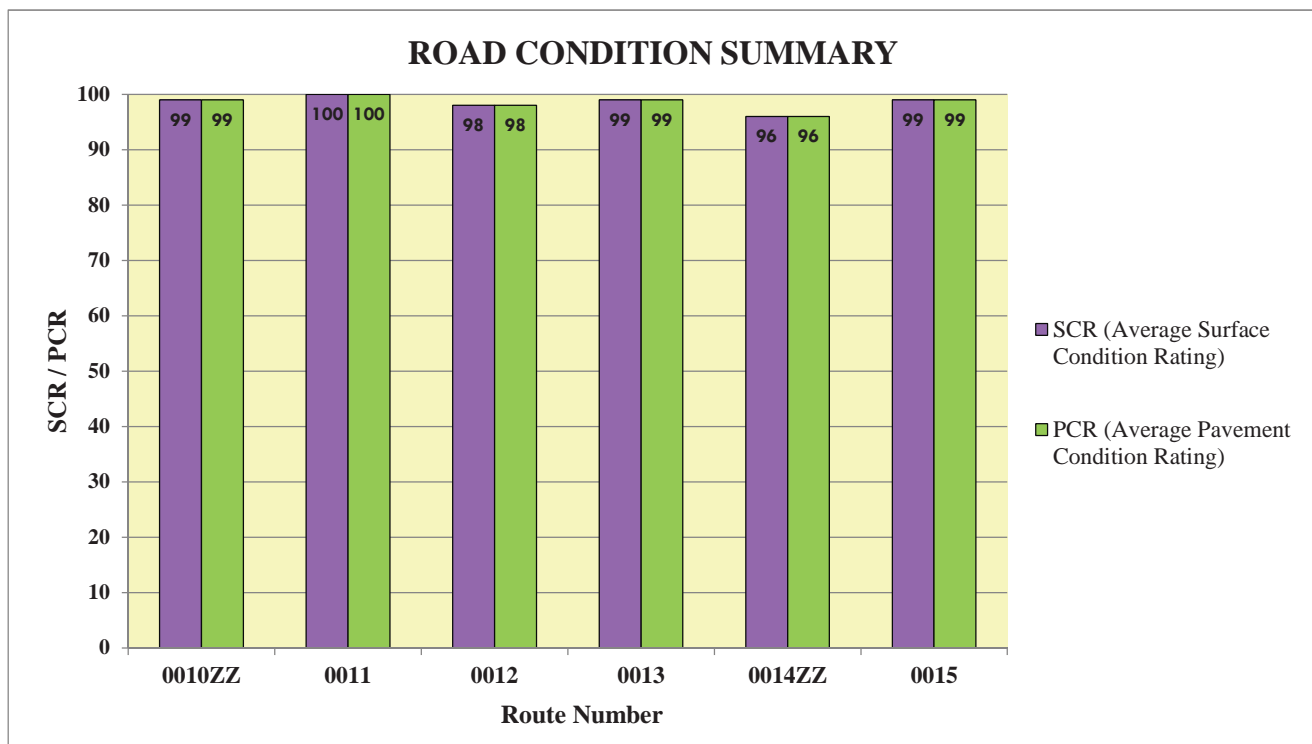
At this time, specific Maintenance and Rehabilitation activities should be evaluated and recommended at the project level. Site-specific conditions that influence treatment type should be determined based on performing a subsurface investigation and/or pavement condition survey, and not be based solely on RIP data. Additionally, RIP produces a snapshot of conditions the year in which the data was collected. For further information or to obtain additional Pavement Management System's data from our Highway Pavement Management Application (HPMA) please contact the Eastern Federal Lands pavement team.

## CONDITION CATEGORIES AND TREATMENTS



# KALA: ROAD CONDITION SUMMARY

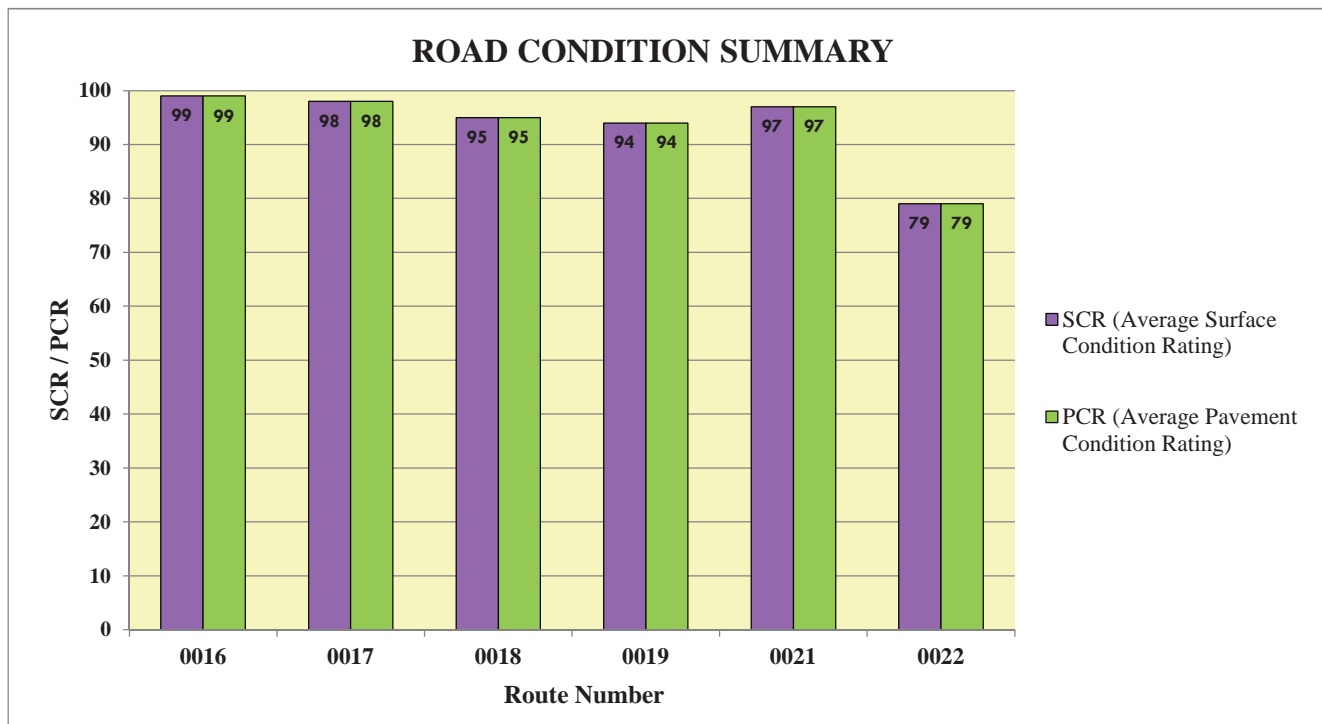
| ROUTE NUMBER | ROUTE NAME        | FUNCTIONAL CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|-------------------|------------------|--------------|--------------|--|---|
| 0010ZZ       | KAMEHAMEHA STREET | 1                | 1.59         | ASPHALT      | 99                                     | 99                                      |
| 0011         | PUAHI STREET      | 1                | 0.44         | ASPHALT      | 100                                    | 100                                     |
| 0012         | DAMIEN STREET     | 1                | 0.47         | ASPHALT      | 98                                     | 98                                      |
| 0013         | BERETANIA STREET  | 1                | 0.33         | ASPHALT      | 99                                     | 99                                      |
| 0014ZZ       | MISSION STREET    | 1                | 0.17         | ASPHALT      | 96                                     | 96                                      |
| 0015         | GOODHUE STREET    | 1                | 0.09         | ASPHALT      | 99                                     | 99                                      |



Date Collected 04/05/2014

# KALA: ROAD CONDITION SUMMARY

| ROUTE NUMBER | ROUTE NAME       | FUNCTIONAL CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|------------------|------------------|--------------|--------------|--|---|
| 0016         | BISHOP STREET    | 1                | 0.08         | ASPHALT      | 99                                     | 99                                      |
| 0017         | MCKINLEY STREET  | 1                | 0.26         | ASPHALT      | 98                                     | 98                                      |
| 0018         | BALDWIN STREET   | 1                | 0.27         | ASPHALT      | 95                                     | 95                                      |
| 0019         | KAIULANI STREET  | 1                | 0.27         | ASPHALT      | 94                                     | 94                                      |
| 0021         | BAYVIEW LOOP     | 1                | 0.16         | ASPHALT      | 97                                     | 97                                      |
| 0022         | HALEAKALA STREET | 1                | 0.07         | ASPHALT      | 79                                     | 79                                      |

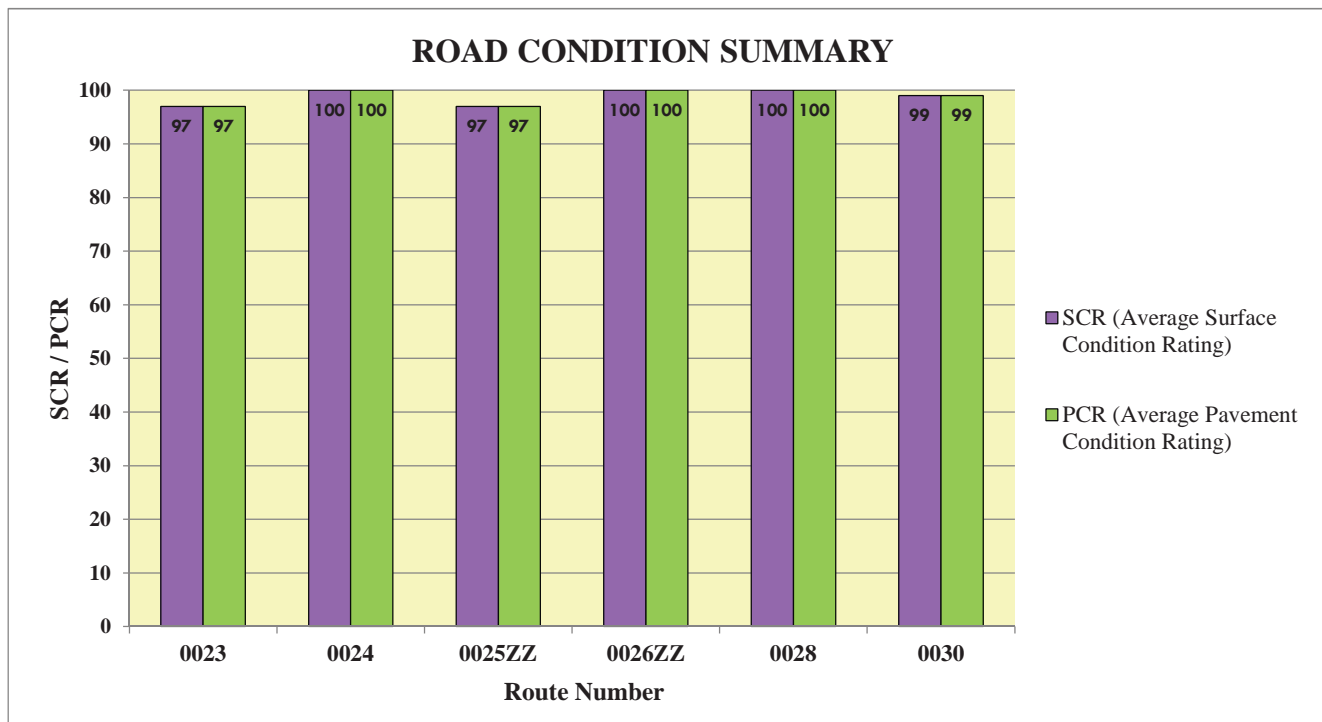


Date Collected 04/05/2014



# KALA: ROAD CONDITION SUMMARY

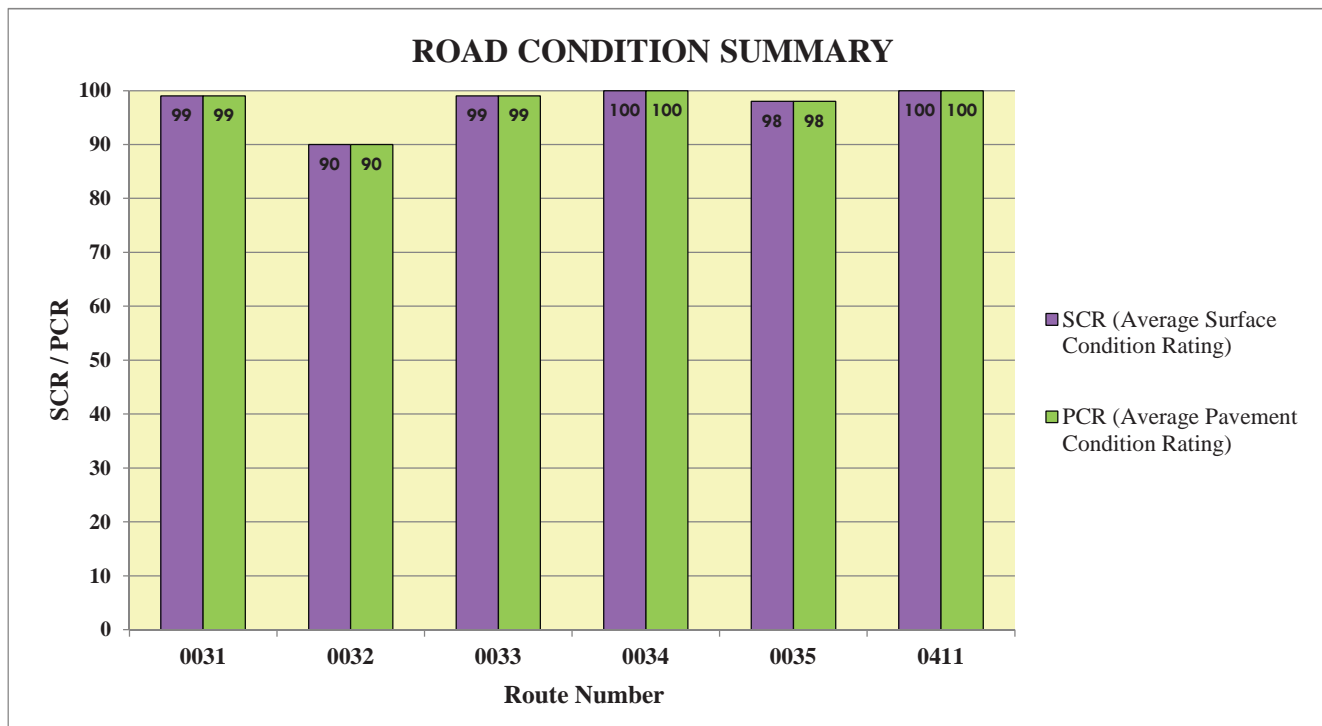
| ROUTE NUMBER | ROUTE NAME                                  | FUNCTIONAL CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|---|------------------|--------------|--------------|--|---|
| 0023         | SCHOOL STREET                               | 1                | 0.23         | ASPHALT      | 97                                     | 97                                      |
| 0024         | KILOHANA STREET                             | 1                | 0.06         | ASPHALT      | 100                                    | 100                                     |
| 0025ZZ       | BISHOP ROAD                                 | 1                | 0.27         | ASPHALT      | 97                                     | 97                                      |
| 0026ZZ       | CONRADY PLACE AND MISSION / PUAHI CONNECTOR | 1                | 0.08         | ASPHALT      | 100                                    | 100                                     |
| 0028         | STAFF STREET (STAFF ROW)                    | 1                | 0.26         | ASPHALT      | 100                                    | 100                                     |
| 0030         | MCVEIGH STREET A                            | 1                | 0.05         | ASPHALT      | 99                                     | 99                                      |



Date Collected 04/05/2014

# KALA: ROAD CONDITION SUMMARY

| ROUTE NUMBER | ROUTE NAME       | FUNCTIONAL CLASS | PAVED LENGTH | SURFACE TYPE | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE PAVEMENT CONDITION RATING (PCR) |
|--------------|------------------|------------------|--------------|--------------|--|---|
| 0031         | MCVEIGH STREET B | 1                | 0.06         | ASPHALT      | 99                                     | 99                                      |
| 0032         | MCVEIGH STREET C | 1                | 0.04         | ASPHALT      | 90                                     | 90                                      |
| 0033         | MCVEIGH STREET D | 1                | 0.05         | ASPHALT      | 99                                     | 99                                      |
| 0034         | MCVEIGH STREET E | 1                | 0.03         | ASPHALT      | 100                                    | 100                                     |
| 0035         | MCVEIGH STREET F | 1                | 0.03         | ASPHALT      | 98                                     | 98                                      |
| 0411         | INDUSTRIAL ROAD  | 5                | 0.12         | ASPHALT      | 100                                    | 100                                     |

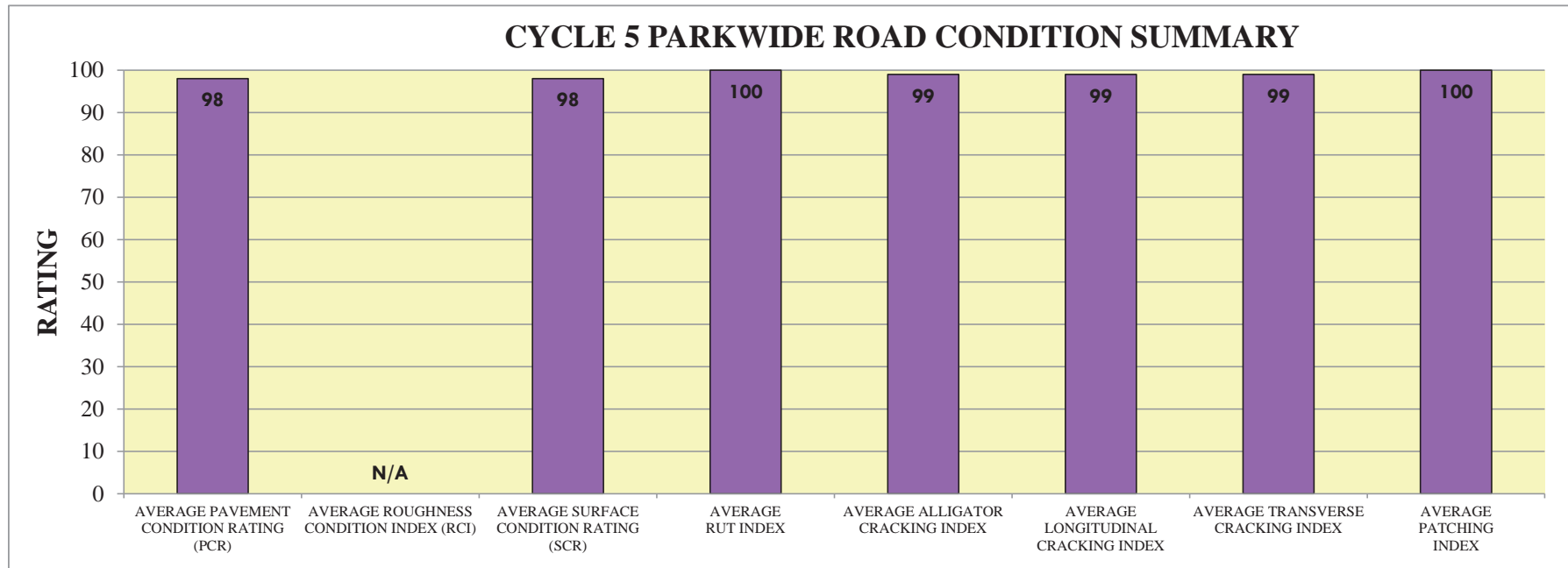


Date Collected 04/05/2014

# KALA: PARKWIDE ROAD CONDITION SUMMARY

| AVERAGE PAVEMENT CONDITION RATING (PCR) | AVERAGE ROUGHNESS CONDITION INDEX (RCI) | AVERAGE SURFACE CONDITION RATING (SCR) | AVERAGE RUT INDEX | AVERAGE ALLIGATOR CRACKING INDEX | AVERAGE LONGITUDINAL CRACKING INDEX | AVERAGE TRANSVERSE CRACKING INDEX | AVERAGE PATCHING INDEX |
|---|---|--|-------------------|----------------------------------|-------------------------------------|-----------------------------------|------------------------|
| 98                                      | N/A                                     | 98                                     | 100               | 99                               | 99                                  | 99                                | 100                    |

*Roughness data is only collected on routes with lengths greater than 0.5 miles and a posted speed limit of 25 MPH or greater.*



*Date Collected 04/05/2014*

# Section 4 Park Route Location Maps



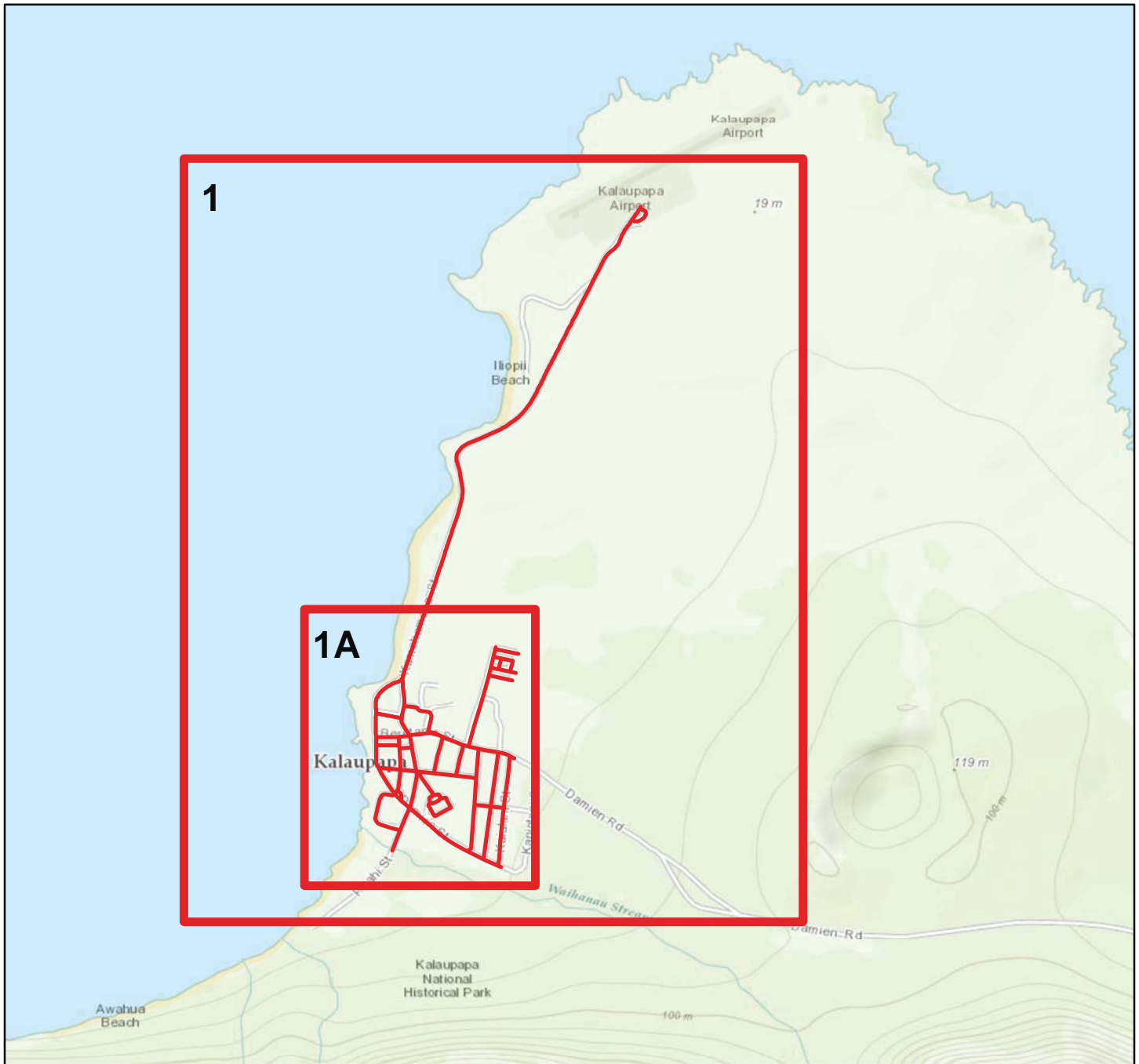
Kalaupapa National Historical Park



Federal Lands Highway  
Road Inventory Program

# Kalaupapa National Historical Park

## Route Location Map Key Map



0 0.2 0.4 0.8 1.2 1.6 Miles

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

— Cycle 5 Collected Routes



# Kalaupapa National Historical Park

## Route Location Map Area 1



0 0.125 0.25 0.5 0.75 1 Miles

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community



Cycle 5 Collected Routes



# Kalaupapa National Historical Park

## Route Location Map Area 1A



0 0.05 0.1 0.2 0.3 0.4 Miles

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community



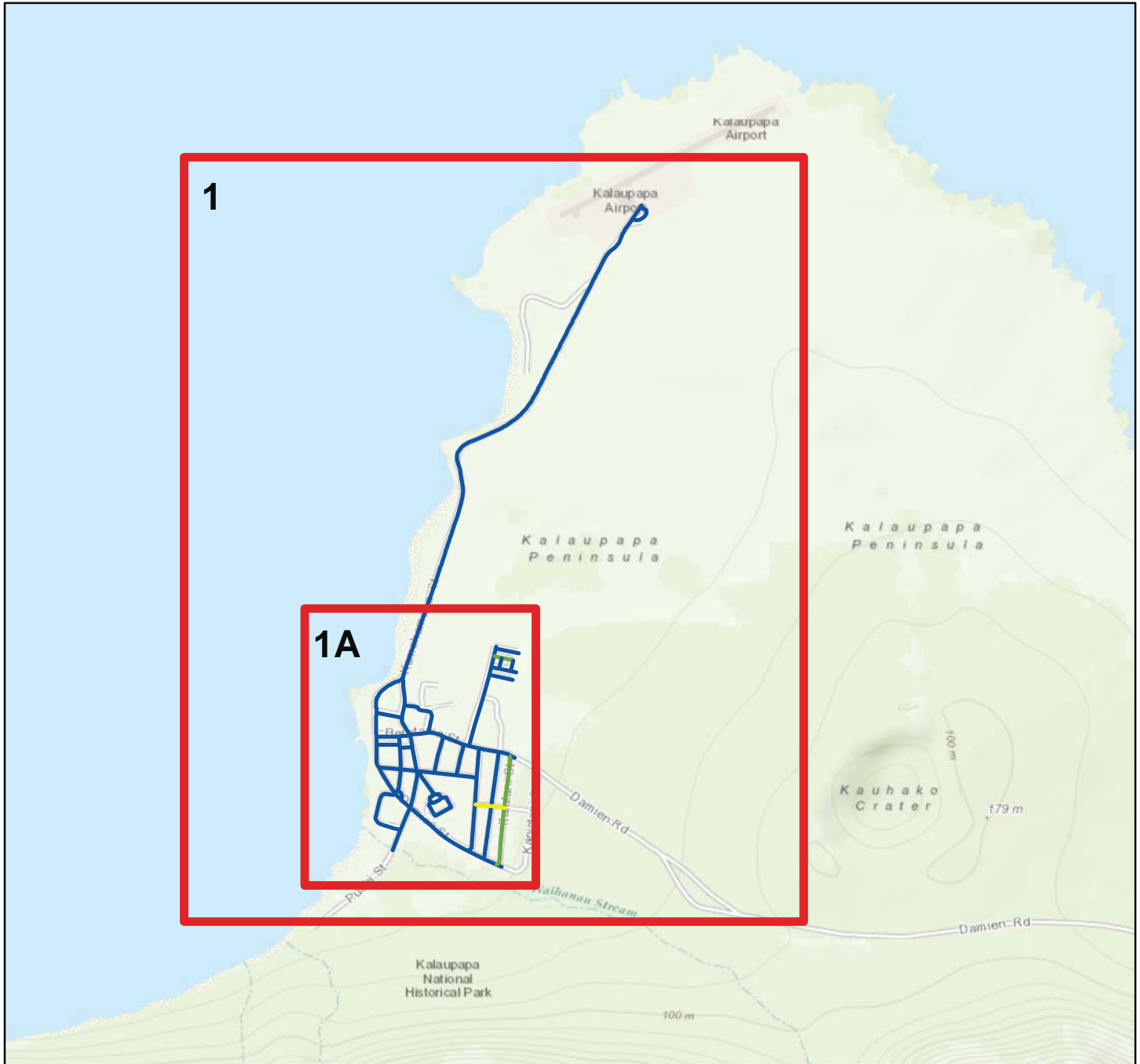
Cycle 5 Collected Routes





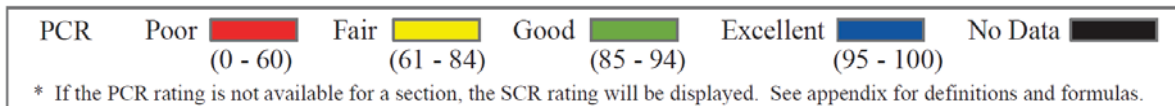
# Kalaupapa National Historical Park

## Route Condition Map PCR - Mile by Mile Key Map



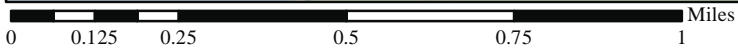
0 0.2 0.4 0.8 1.2 1.6 Miles

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

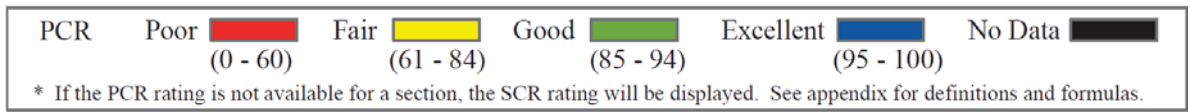


# Kalaupapa National Historical Park

## Route Condition Map PCR - Mile by Mile Area 1



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community



# Kalaupapa National Historical Park

## Route Condition Map PCR - Mile by Mile Area 1A



0 0.05 0.1 0.2 0.3 0.4 Miles

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

|     |          |           |           |            |         |
|-----|----------|-----------|-----------|------------|---------|
| PCR | Poor     | Fair      | Good      | Excellent  | No Data |
|     | (0 - 60) | (61 - 84) | (85 - 94) | (95 - 100) |         |

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.



**Section 5**  
**Paved Route Condition Rating Sheets**



**Kalaupapa National Historical Park**



**Federal Lands Highway  
Road Inventory Program**

## **PAVED ROUTE CONDITION RATING SHEETS**

The RIP Data Collection Vehicle (DCV) did not visit Kalaupapa National Historical Park due to its remote location. Manual methods were used in place of the DCV to rate the condition of the paved roads. These ratings can be found in Section 6 of this Report. Therefore, there is nothing to report in Section 5.



**Section 6**  
**Manually Rated Paved Route**  
**Condition Rating Sheets**



**Kalaupapa National Historical Park**



**Federal Lands Highway**  
**Road Inventory Program**

## **EXPLANATION OF MANUAL RATING METHODS USED**

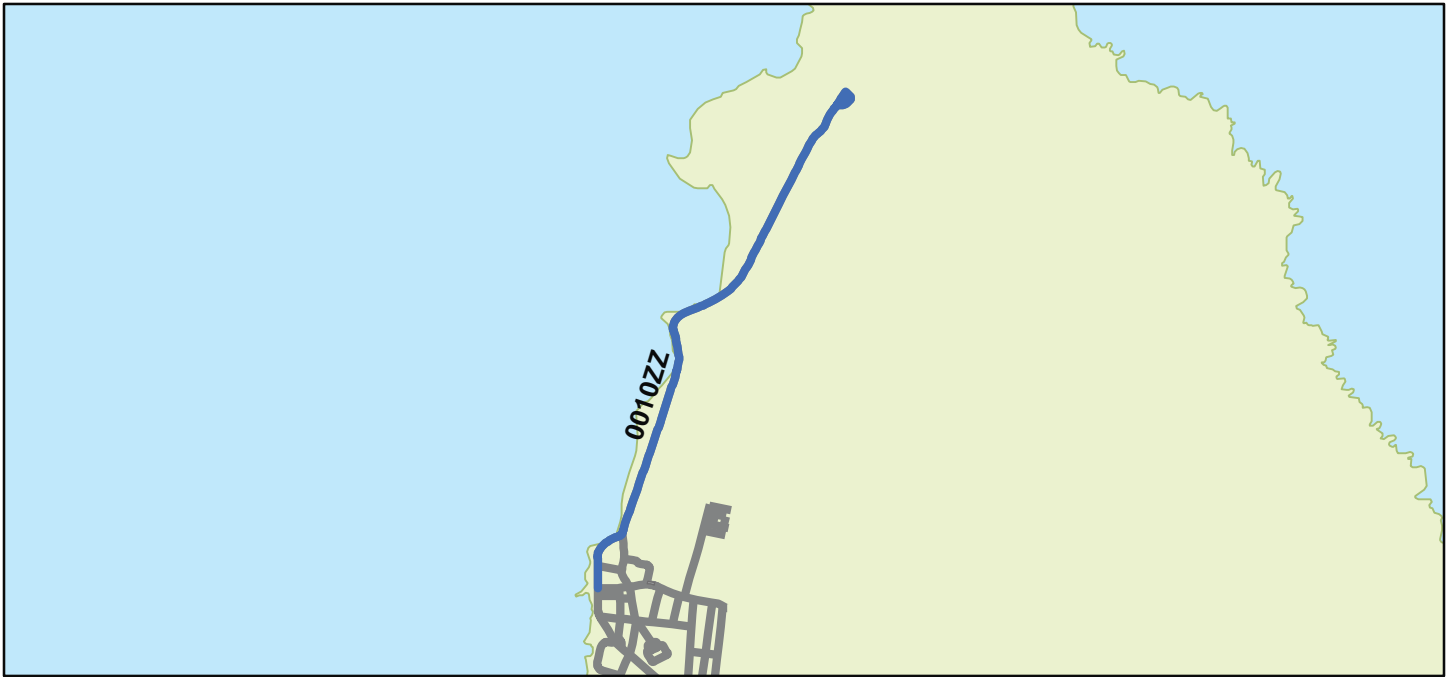
The RIP Data Collection Vehicle (DCV) did not visit Kalaupapa National Historical Park due to its remote location. Because of this, a more rigorous and detailed manual condition rating method was performed on the roads that included the measurement and tabulation of distress data and the collection of roadside feature locations. The end result of this manual condition rating produced index values comparable to the Data Collection Vehicle (DCV). The methodology used for rating these roads is described in the Appendix under the section for *Distress Measurement Method for Manually Rating Primary Roads*.



# Kalaupapa National Historical Park

## ROUTE 0010ZZ: KAMEHAMEHA STREET

### Summary Route



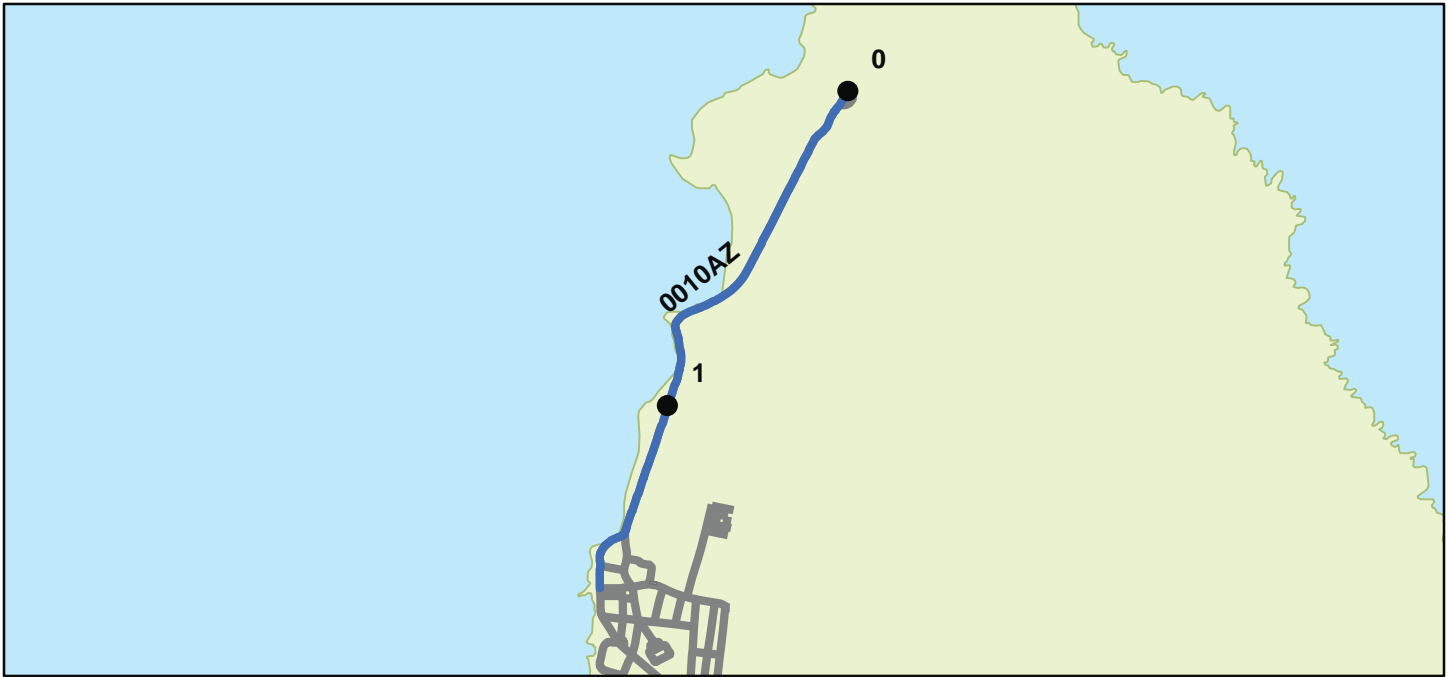
| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      |           |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 1.59     | <b>Section Length (MI)</b> |           |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 99                         |           |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 99                         |           |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        |           |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 99                         |           |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        |           |      |           |                      |         |  |
| Patching Index   |          | 100                        |           |      |           |                      |         |  |
| Rutting Index  |          | 100                        |           |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        |           |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          |           |      |           |                      |         |  |
| Paved Width (ft)   |          | 14.9                       |           |      |           |                      |         |  |
| Lane Width (ft)  |          | 14.9                       |           |      |           |                      |         |  |

# Kalaupapa National Historical Park

## ROUTE 0010AZ: KAMEHAMEHA STREET A

Subcomponent of KALA-0010ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         | 1    |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 1.53     | <b>Section Length (MI)</b> | 1         | 0.53 |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          | 99       | 99                         | 100       |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           | 99       | 99                         | 100       |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   | 99       | 99                         | 100       |      |           |                      |         |  |
| Transverse Cracking Index                                | 100      | 100                        | 100       |      |           |                      |         |  |
| Patching Index   | 100      | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  | 100      | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      | N/A      | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  | 1        | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   | 15       | 15                         | 15        |      |           |                      |         |  |
| Lane Width (ft)  | 15       | 15                         | 15        |      |           |                      |         |  |

# Kalaupapa National Historical Park

## ROUTE 0010AZ: KAMEHAMEHA STREET A

### Condition Photos



KALA\_0010AZ\_7030.JPG



KALA\_0010AZ\_7032.JPG



KALA\_0010AZ\_7033.JPG



KALA\_0010AZ\_7035.JPG



KALA\_0010AZ\_7036.JPG



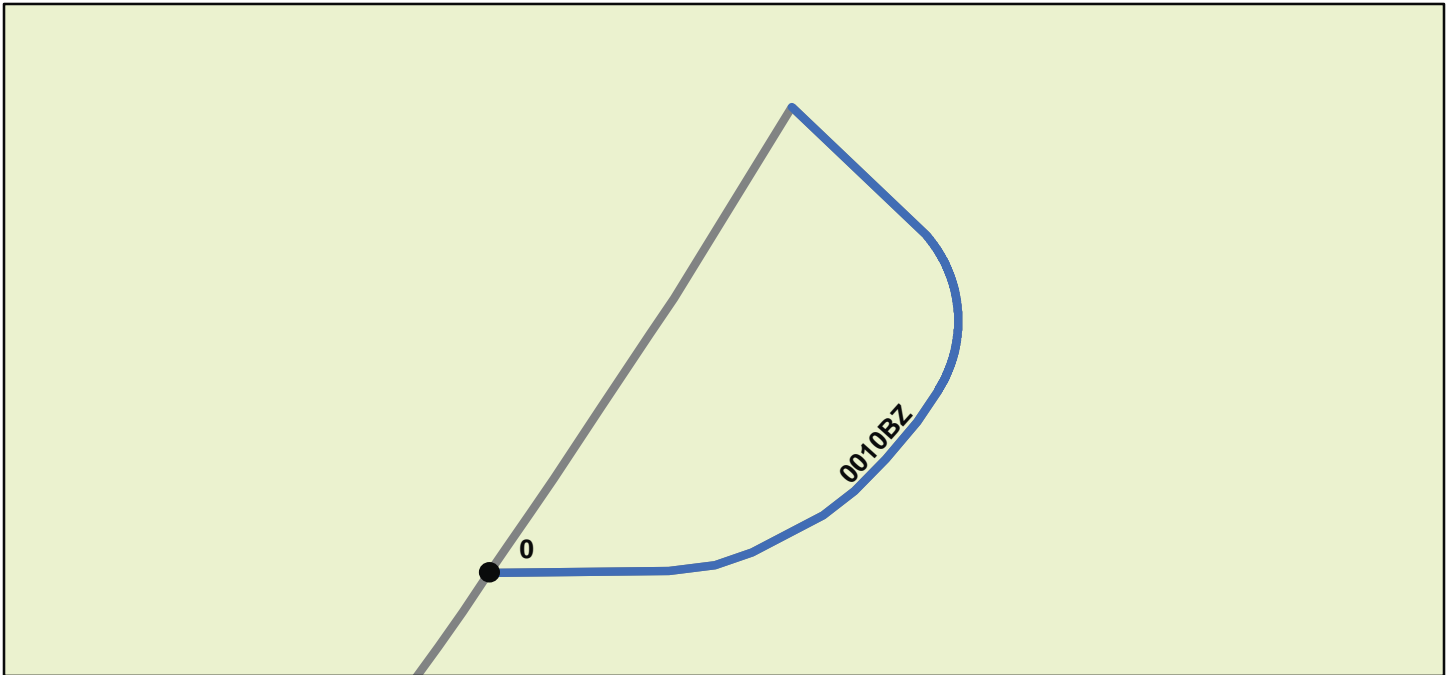
KALA\_0010AZ\_7037.JPG

# Kalaupapa National Historical Park

## ROUTE 0010BZ: KAMEHAMEHA STREET B

Subcomponent of KALA-0010ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.05     | <b>Section Length (MI)</b> | 0.05      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 100                        | 100       |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |         |  |
| Patching Index   |          | 99                         | 99        |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 12                         | 12        |      |           |                      |         |  |
| Lane Width (ft)  |          | 12                         | 12        |      |           |                      |         |  |



# Kalaupapa National Historical Park

## ROUTE 0010BZ: KAMEHAMEHA STREET B

### Condition Photos



KALA\_0010BZ\_7222.JPG



KALA\_0010BZ\_7223.JPG



KALA\_0010BZ\_7224.JPG

# Kalaupapa National Historical Park

## ROUTE 0011: PUAHI STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
| No Data  |          |                            |           |      |           |                      |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.44     | <b>Section Length (MI)</b> | 0.44      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          |          | 100                        | 100       |      |           |                      |
| Surface Condition Rating (SCR)                           |          | 100                        | 100       |      |           |                      |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   |          | 100                        | 100       |      |           |                      |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |
| Patching Index   |          | 100                        | 100       |      |           |                      |
| Rutting Index  |          | 100                        | 100       |      |           |                      |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |
| Paved Width (ft)   |          | 12                         | 12        |      |           |                      |
| Lane Width (ft)  |          | 12                         | 12        |      |           |                      |



# Kalaupapa National Historical Park

## ROUTE 0011: PUAHI STREET

### Condition Photos



KALA\_0011\_7203.JPG



KALA\_0011\_7204.JPG



KALA\_0011\_7205.JPG



KALA\_0011\_7209.JPG



KALA\_0011\_7212.JPG



KALA\_0011\_7213.JPG



# Kalaupapa National Historical Park

## ROUTE 0012: DAMIEN STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |           |            |         |  |        |
|--|----------|----------------------------|-----------|------|-----------|-----------|------------|---------|--|--------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | No Data |  | N<br>↑ |
| See Appendix for definitions and formulas                |          |                            |           |      |           |           |            |         |  |        |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |           |            |         |  |        |
| <b>Paved Length (Miles):</b>                             | 0.47     | <b>Section Length (MI)</b> | 0.47      |      |           |           |            |         |  |        |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |           |            |         |  |        |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |           |            |         |  |        |
| Pavement Condition Rating (PCR)                          |          | 98                         | 98        |      |           |           |            |         |  |        |
| Surface Condition Rating (SCR)                           |          | 98                         | 98        |      |           |           |            |         |  |        |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |           |            |         |  |        |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |           |            |         |  |        |
| Structural Crack Index                                   |          | 98                         | 98        |      |           |           |            |         |  |        |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |           |            |         |  |        |
| Patching Index   |          | 100                        | 100       |      |           |           |            |         |  |        |
| Rutting Index  |          | 100                        | 100       |      |           |           |            |         |  |        |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |           |            |         |  |        |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |           |            |         |  |        |
| Number of Lanes  |          | 1                          | 1         |      |           |           |            |         |  |        |
| Paved Width (ft)   |          | 14.5                       | 14.5      |      |           |           |            |         |  |        |
| Lane Width (ft)  |          | 14.5                       | 14.5      |      |           |           |            |         |  |        |

# Kalaupapa National Historical Park

## ROUTE 0012: DAMIEN STREET

### Condition Photos



KALA\_0012\_7191.JPG



KALA\_0012\_7197.JPG



KALA\_0012\_7198.JPG



KALA\_0012\_7199.JPG



KALA\_0012\_7201.JPG



KALA\_0012\_7202.JPG

# Kalaupapa National Historical Park

## ROUTE 0013: BERETANIA STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
| No Data  |          |                            |           |      |           |                      |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.33     | <b>Section Length (MI)</b> | 0.33      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |                      |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |                      |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   |          | 99                         | 99        |      |           |                      |
| Transverse Cracking Index                                |          | 99                         | 99        |      |           |                      |
| Patching Index   |          | 100                        | 100       |      |           |                      |
| Rutting Index  |          | 100                        | 100       |      |           |                      |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |
| Paved Width (ft)   |          | 15                         | 15        |      |           |                      |
| Lane Width (ft)  |          | 15                         | 15        |      |           |                      |



# Kalaupapa National Historical Park

## ROUTE 0013: BERETANIA STREET

### Condition Photos



KALA\_0013\_7095.JPG



KALA\_0013\_7096.JPG



KALA\_0013\_7097.JPG



KALA\_0013\_7098.JPG

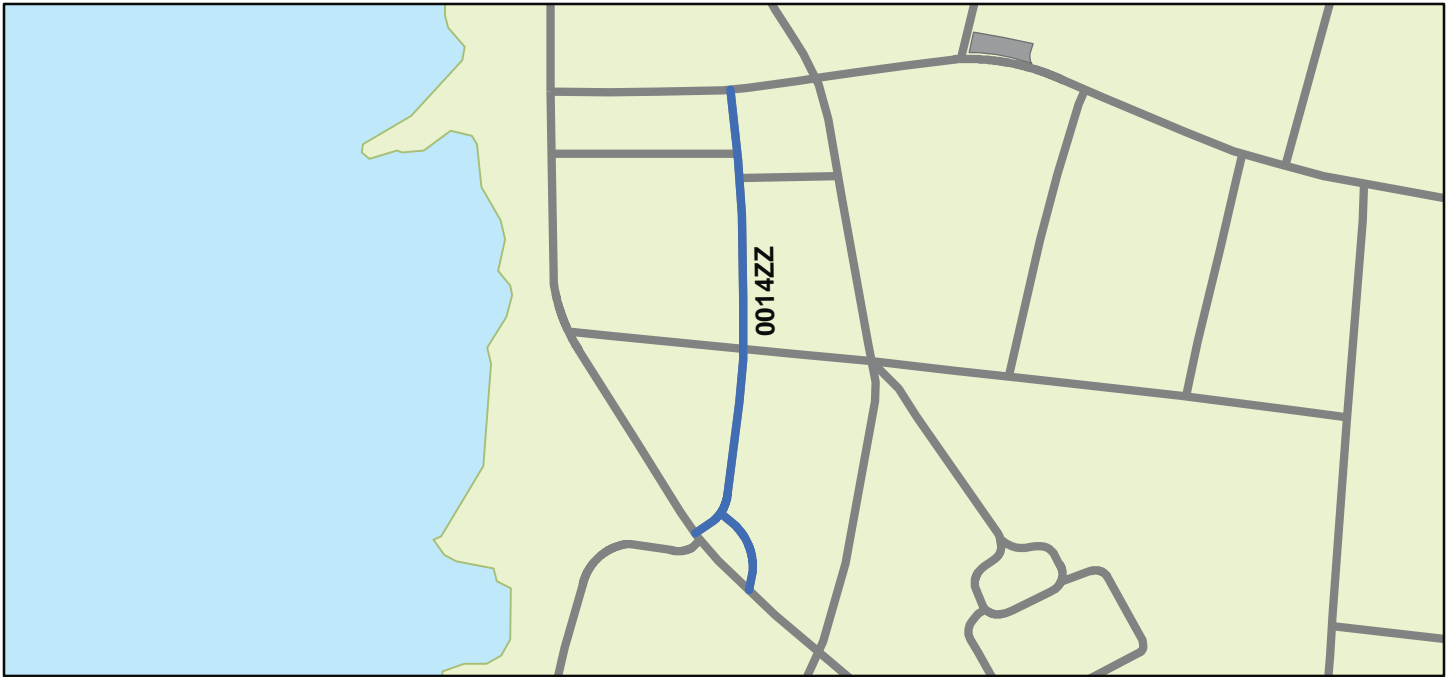


KALA\_0013\_7099.JPG

# Kalaupapa National Historical Park

## ROUTE 0014ZZ: MISSION STREET

### Summary Route



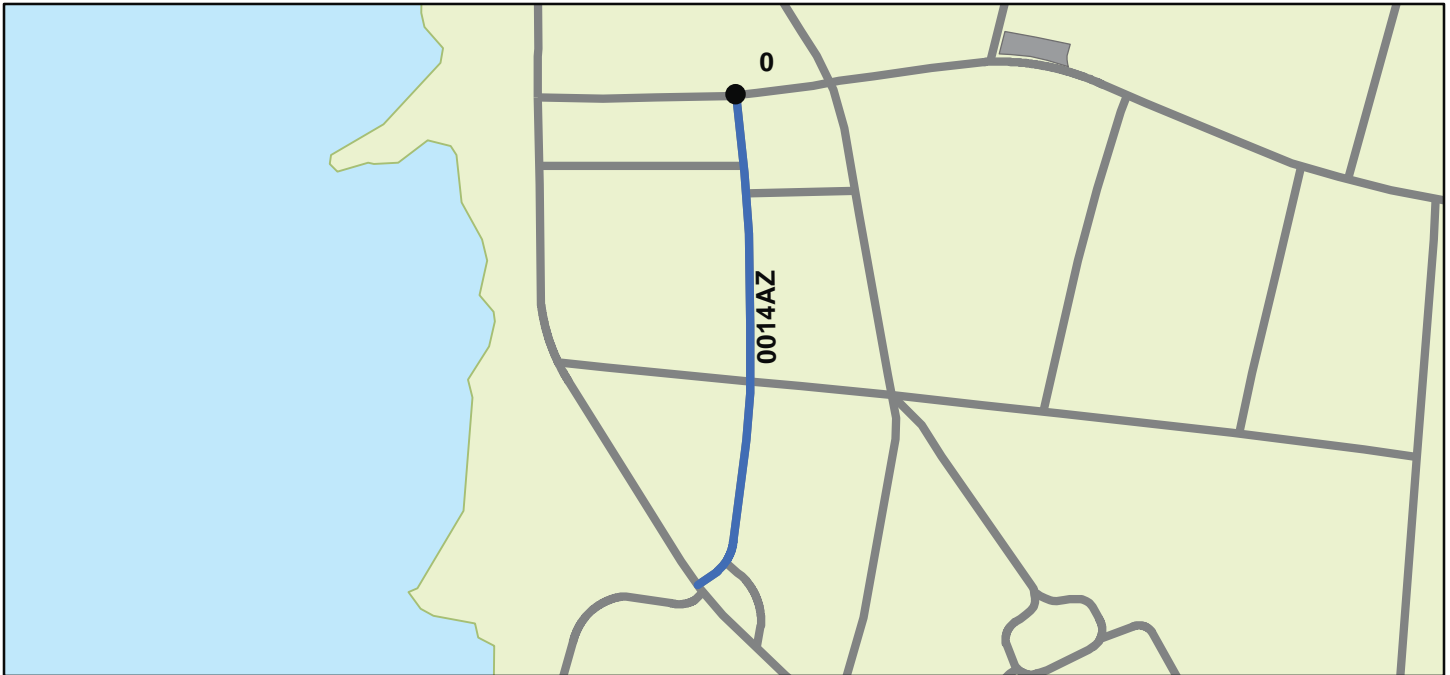
| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |           |            |         |  |        |
|--|----------|----------------------------|-----------|------|-----------|-----------|------------|---------|--|--------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | No Data |  | N<br>↑ |
| See Appendix for definitions and formulas                |          |                            |           |      |           |           |            |         |  |        |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      |           |      |           |           |            |         |  |        |
| <b>Paved Length (Miles):</b>                             | 0.17     | <b>Section Length (MI)</b> |           |      |           |           |            |         |  |        |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |           |            |         |  |        |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |           |            |         |  |        |
| Pavement Condition Rating (PCR)                          |          | 96                         |           |      |           |           |            |         |  |        |
| Surface Condition Rating (SCR)                           |          | 96                         |           |      |           |           |            |         |  |        |
| Roughness Condition Index (RCI)                          |          | N/A                        |           |      |           |           |            |         |  |        |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |           |            |         |  |        |
| Structural Crack Index                                   |          | 99                         |           |      |           |           |            |         |  |        |
| Transverse Cracking Index                                |          | 96                         |           |      |           |           |            |         |  |        |
| Patching Index   |          | 100                        |           |      |           |           |            |         |  |        |
| Rutting Index  |          | 100                        |           |      |           |           |            |         |  |        |
| International Roughness Index (IRI)                      |          | N/A                        |           |      |           |           |            |         |  |        |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |           |            |         |  |        |
| Number of Lanes  |          | 1                          |           |      |           |           |            |         |  |        |
| Paved Width (ft)   |          | 15                         |           |      |           |           |            |         |  |        |
| Lane Width (ft)  |          | 15                         |           |      |           |           |            |         |  |        |

# Kalaupapa National Historical Park

## ROUTE 0014AZ: MISSION STREET (MAIN ROAD)

Subcomponent of KALA-0014ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
|  |          |                            |           |      |           | No Data              |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.14     | <b>Section Length (MI)</b> | 0.14      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          |          | 95                         | 95        |      |           |                      |
| Surface Condition Rating (SCR)                           |          | 95                         | 95        |      |           |                      |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   |          | 99                         | 99        |      |           |                      |
| Transverse Cracking Index                                |          | 95                         | 95        |      |           |                      |
| Patching Index   |          | 100                        | 100       |      |           |                      |
| Rutting Index  |          | 100                        | 100       |      |           |                      |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |
| Paved Width (ft)   |          | 15                         | 15        |      |           |                      |
| Lane Width (ft)  |          | 15                         | 15        |      |           |                      |



# Kalaupapa National Historical Park

ROUTE 0014AZ: MISSION STREET (MAIN ROAD)

## Condition Photos



KALA\_0014AZ\_7062.JPG



KALA\_0014AZ\_7064.JPG



KALA\_0014AZ\_7066.JPG



KALA\_0014AZ\_7067.JPG

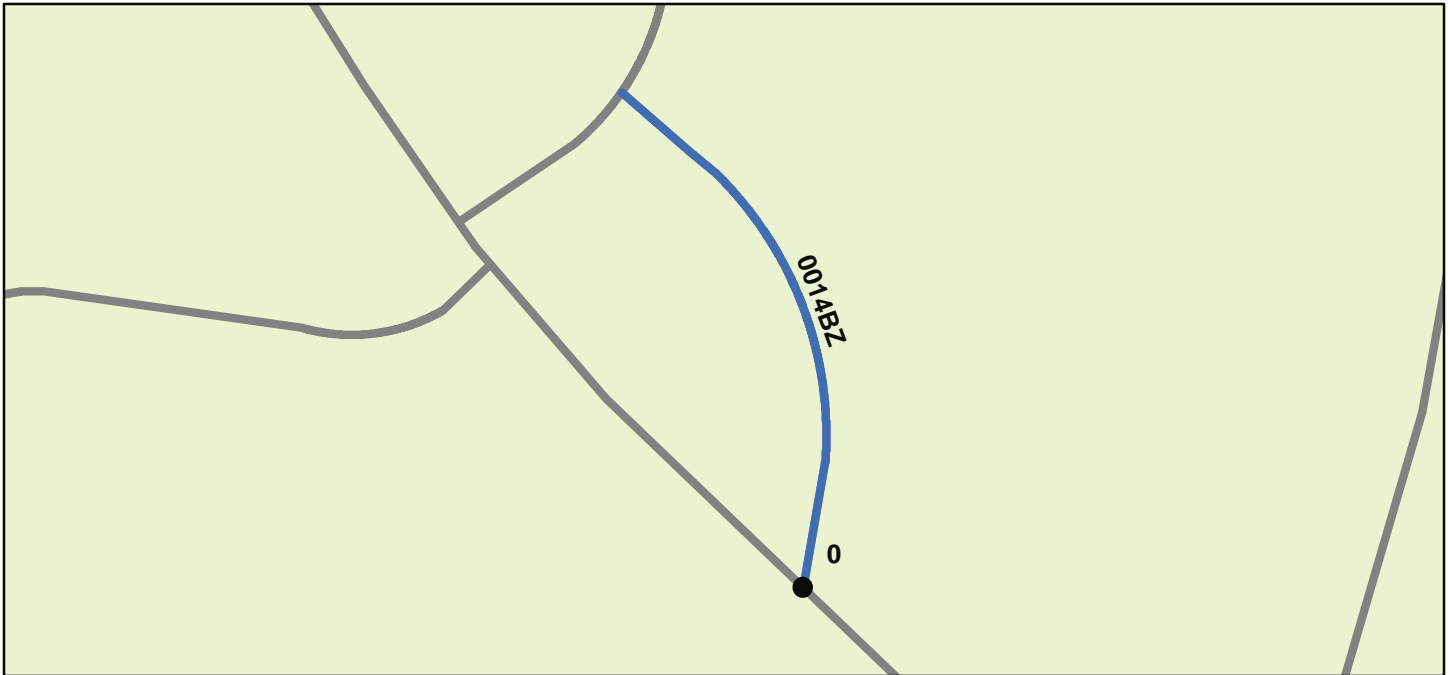


# Kalaupapa National Historical Park

## ROUTE 0014BZ: MISSION STREET (SOUTH SPUR ROAD)

Subcomponent of KALA-0014ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |           |            |         |  |        |
|--|----------|----------------------------|-----------|------|-----------|-----------|------------|---------|--|--------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | No Data |  | N<br>↑ |
| See Appendix for definitions and formulas                |          |                            |           |      |           |           |            |         |  |        |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |           |            |         |  |        |
| <b>Paved Length (Miles):</b>                             | 0.03     | <b>Section Length (MI)</b> | 0.03      |      |           |           |            |         |  |        |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |           |            |         |  |        |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |           |            |         |  |        |
| Pavement Condition Rating (PCR)                          |          | 100                        | 100       |      |           |           |            |         |  |        |
| Surface Condition Rating (SCR)                           |          | 100                        | 100       |      |           |           |            |         |  |        |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |           |            |         |  |        |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |           |            |         |  |        |
| Structural Crack Index                                   |          | 100                        | 100       |      |           |           |            |         |  |        |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |           |            |         |  |        |
| Patching Index   |          | 100                        | 100       |      |           |           |            |         |  |        |
| Rutting Index  |          | 100                        | 100       |      |           |           |            |         |  |        |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |           |            |         |  |        |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |           |            |         |  |        |
| Number of Lanes  |          | 1                          | 1         |      |           |           |            |         |  |        |
| Paved Width (ft)   |          | 15                         | 15        |      |           |           |            |         |  |        |
| Lane Width (ft)  |          | 15                         | 15        |      |           |           |            |         |  |        |

**Kalaupapa National Historical Park**  
**ROUTE 0014BZ: MISSION STREET (SOUTH SPUR ROAD)**

**Condition Photos**



**KALA\_0014BZ\_7068.JPG**



**KALA\_0014BZ\_7069.JPG**

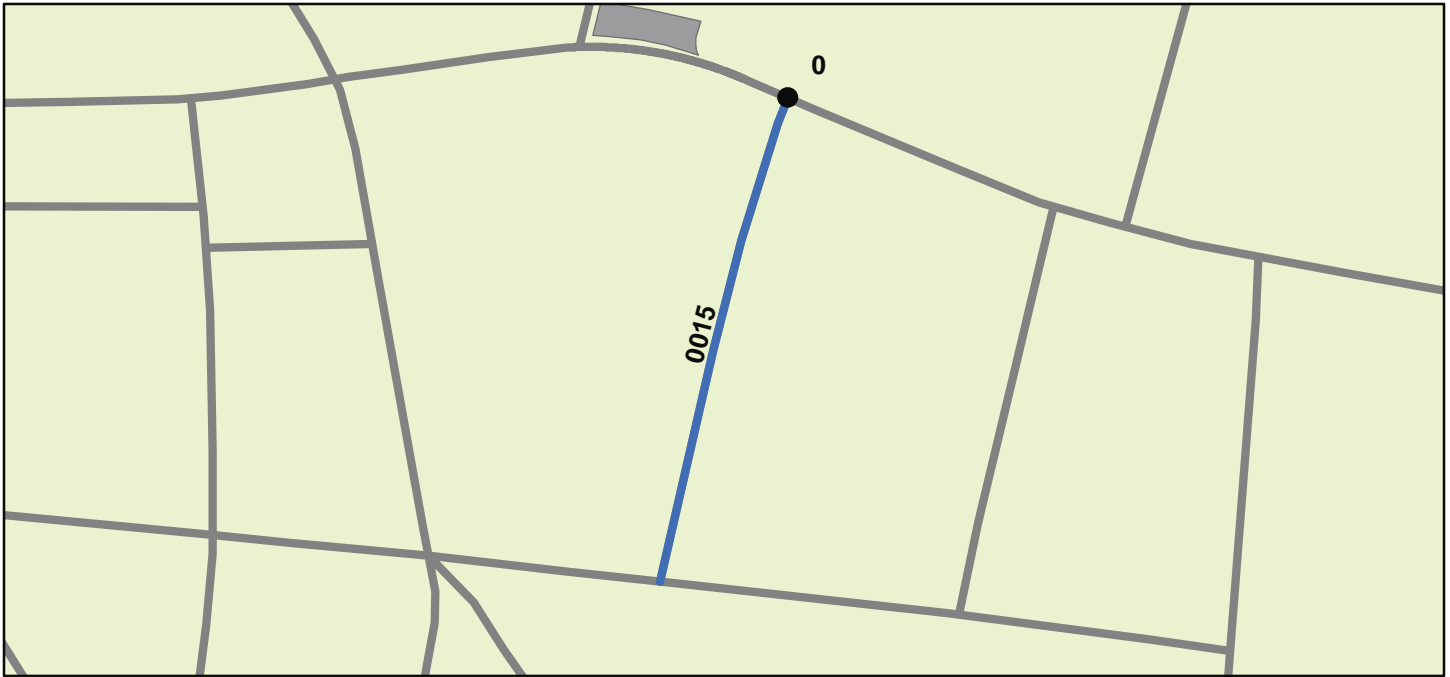


**KALA\_0014BZ\_7070.JPG**

# Kalaupapa National Historical Park

## ROUTE 0015: GOODHUE STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |           |            |         |  |        |
|--|----------|----------------------------|-----------|------|-----------|-----------|------------|---------|--|--------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | No Data |  | N<br>↑ |
| See Appendix for definitions and formulas                |          |                            |           |      |           |           |            |         |  |        |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |           |            |         |  |        |
| <b>Paved Length (Miles):</b>                             | 0.09     | <b>Section Length (MI)</b> | 0.09      |      |           |           |            |         |  |        |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |           |            |         |  |        |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |           |            |         |  |        |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |           |            |         |  |        |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |           |            |         |  |        |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |           |            |         |  |        |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |           |            |         |  |        |
| Structural Crack Index                                   |          | 99                         | 99        |      |           |           |            |         |  |        |
| Transverse Cracking Index                                |          | 99                         | 99        |      |           |           |            |         |  |        |
| Patching Index   |          | 100                        | 100       |      |           |           |            |         |  |        |
| Rutting Index  |          | 100                        | 100       |      |           |           |            |         |  |        |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |           |            |         |  |        |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |           |            |         |  |        |
| Number of Lanes  |          | 1                          | 1         |      |           |           |            |         |  |        |
| Paved Width (ft)   |          | 12                         | 12        |      |           |           |            |         |  |        |
| Lane Width (ft)  |          | 12                         | 12        |      |           |           |            |         |  |        |

# Kalaupapa National Historical Park

## ROUTE 0015: GOODHUE STREET

### Condition Photos



KALA\_0015\_7179.JPG



KALA\_0015\_7181.JPG



KALA\_0015\_7182.JPG



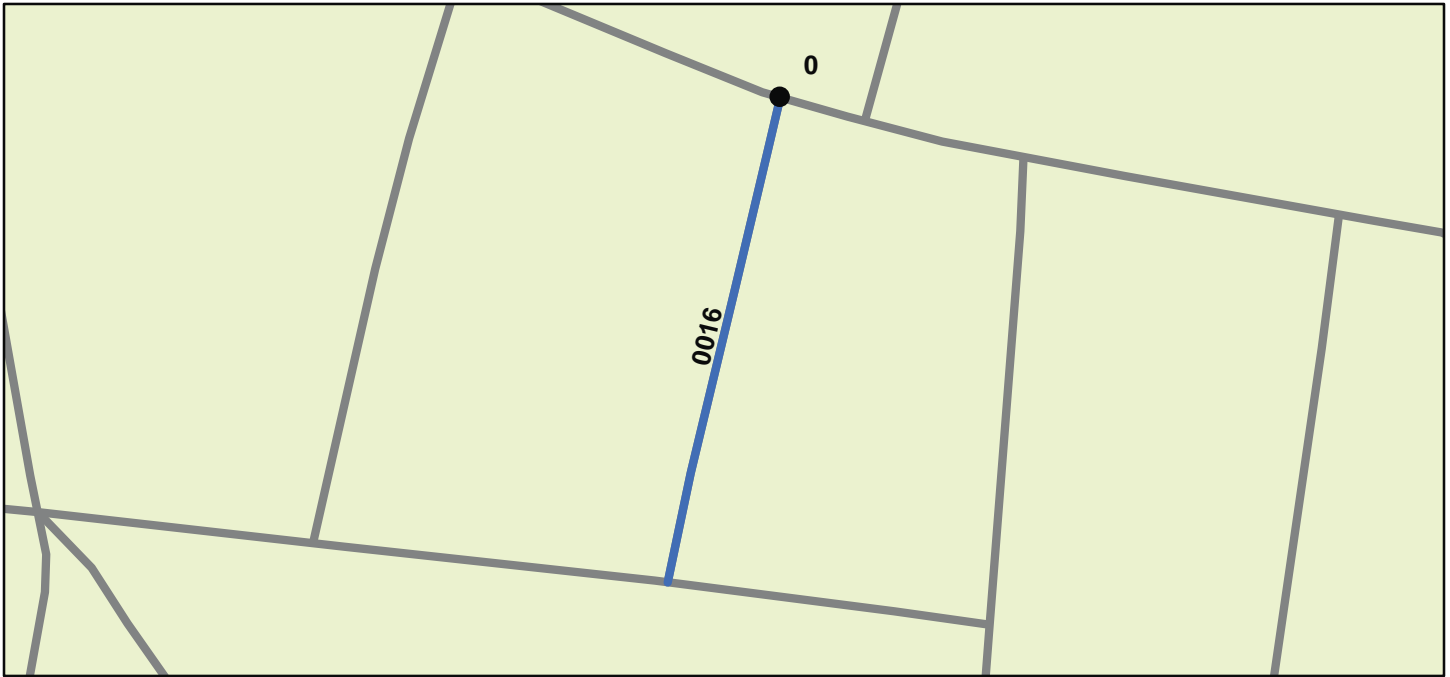
KALA\_0015\_7183.JPG



# Kalaupapa National Historical Park

## ROUTE 0016: BISHOP STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
| No Data  |          |                            |           |      |           |                      |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.08     | <b>Section Length (MI)</b> | 0.08      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          | 99       | 99                         |           |      |           |                      |
| Surface Condition Rating (SCR)                           | 99       | 99                         |           |      |           |                      |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   | 99       | 99                         |           |      |           |                      |
| Transverse Cracking Index                                | 100      | 100                        |           |      |           |                      |
| Patching Index   | 100      | 100                        |           |      |           |                      |
| Rutting Index  | 100      | 100                        |           |      |           |                      |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                      |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                      |



# Kalaupapa National Historical Park

## ROUTE 0016: BISHOP STREET

### Condition Photos



KALA\_0016\_7173.JPG



KALA\_0016\_7174.JPG

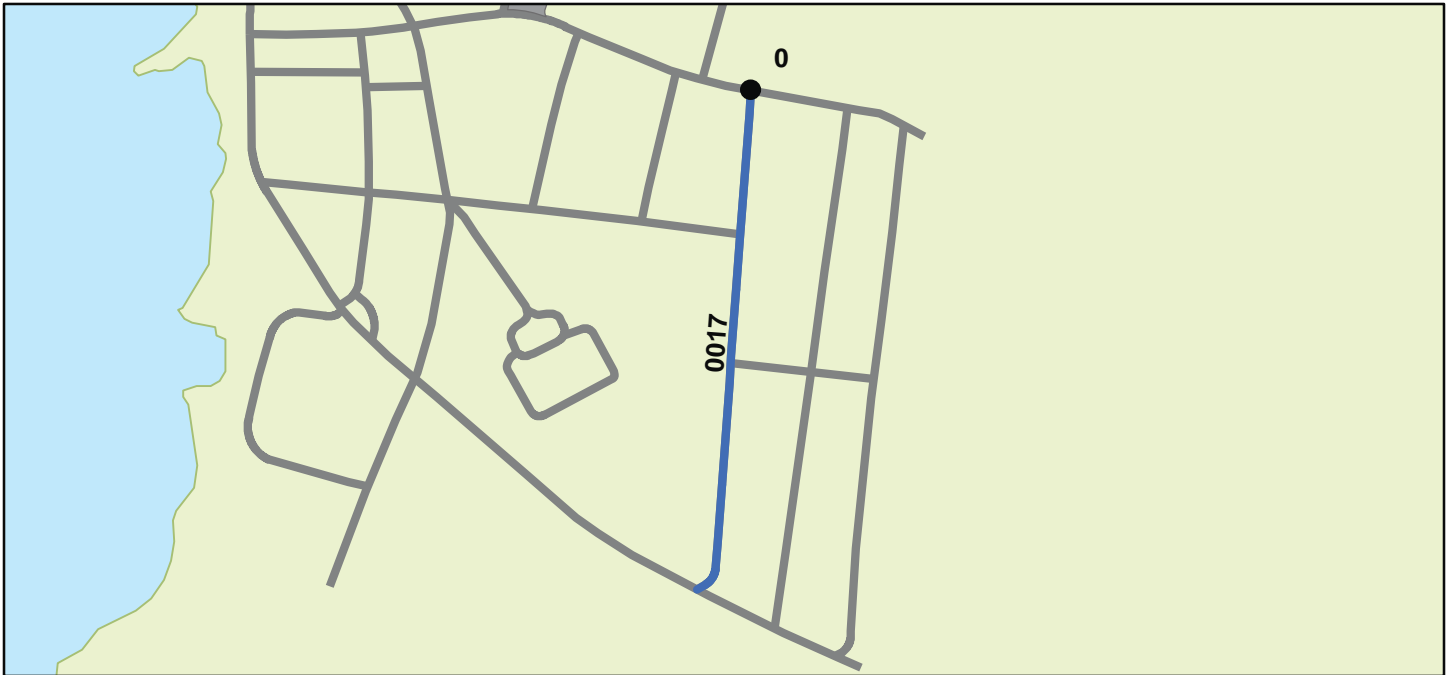


KALA\_0016\_7175.JPG

# Kalaupapa National Historical Park

## ROUTE 0017: MCKINLEY STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.26     | <b>Section Length (MI)</b> | 0.26      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 98                         | 98        |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 98                         | 98        |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 98                         | 98        |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 99                         | 99        |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 12                         | 12        |      |           |                      |         |  |
| Lane Width (ft)  |          | 12                         | 12        |      |           |                      |         |  |

# Kalaupapa National Historical Park

## ROUTE 0017: MCKINLEY STREET

### Condition Photos



KALA\_0017\_7118.JPG



KALA\_0017\_7119.JPG



KALA\_0017\_7120.JPG

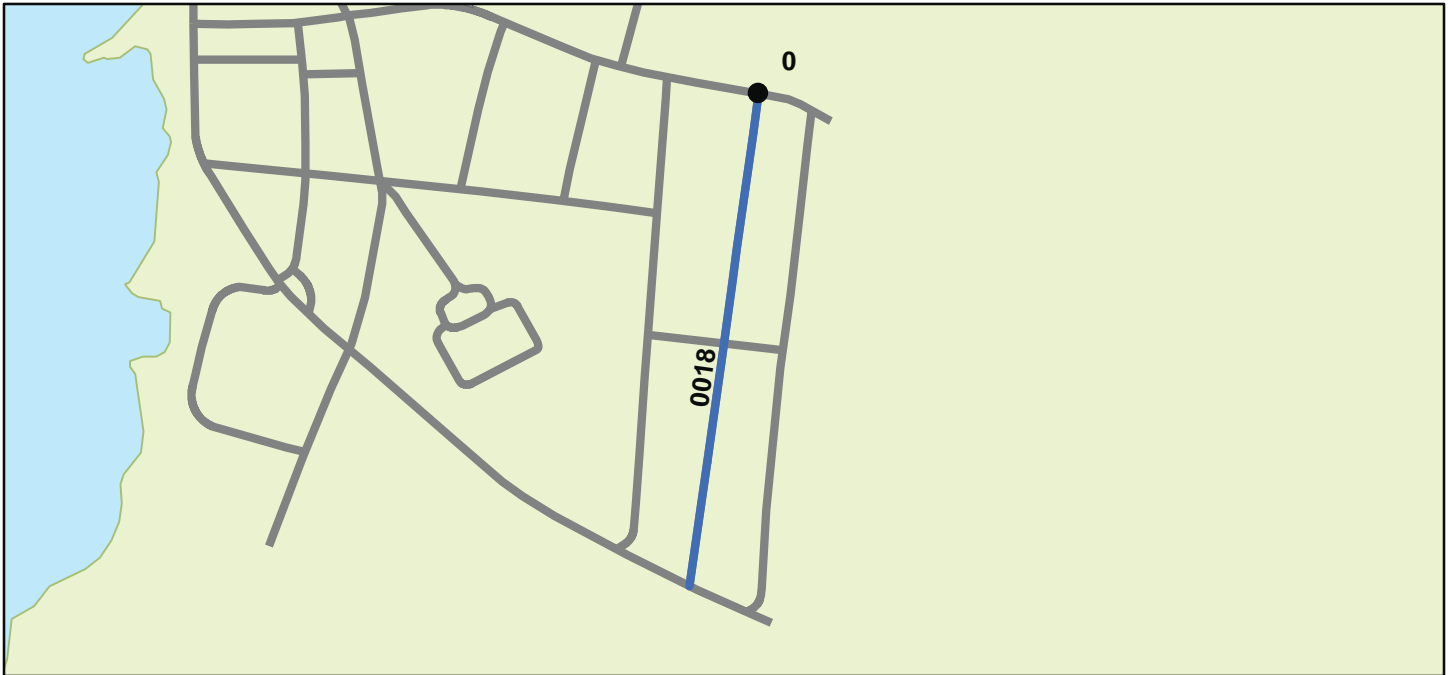


KALA\_0017\_7122.JPG

# Kalaupapa National Historical Park

## ROUTE 0018: BALDWIN STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
| No Data  |          |                            |           |      |           |                      |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.27     | <b>Section Length (MI)</b> | 0.27      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          | 95       | 95                         |           |      |           |                      |
| Surface Condition Rating (SCR)                           | 95       | 95                         |           |      |           |                      |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   | 95       | 95                         |           |      |           |                      |
| Transverse Cracking Index                                | 97       | 97                         |           |      |           |                      |
| Patching Index   | 100      | 100                        |           |      |           |                      |
| Rutting Index  | 100      | 100                        |           |      |           |                      |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |
| Paved Width (ft)   | 12.5     | 12.5                       |           |      |           |                      |
| Lane Width (ft)  | 12.5     | 12.5                       |           |      |           |                      |



# Kalaupapa National Historical Park

## ROUTE 0018: BALDWIN STREET

### Condition Photos



KALA\_0018\_7111.JPG



KALA\_0018\_7112.JPG



KALA\_0018\_7113.JPG



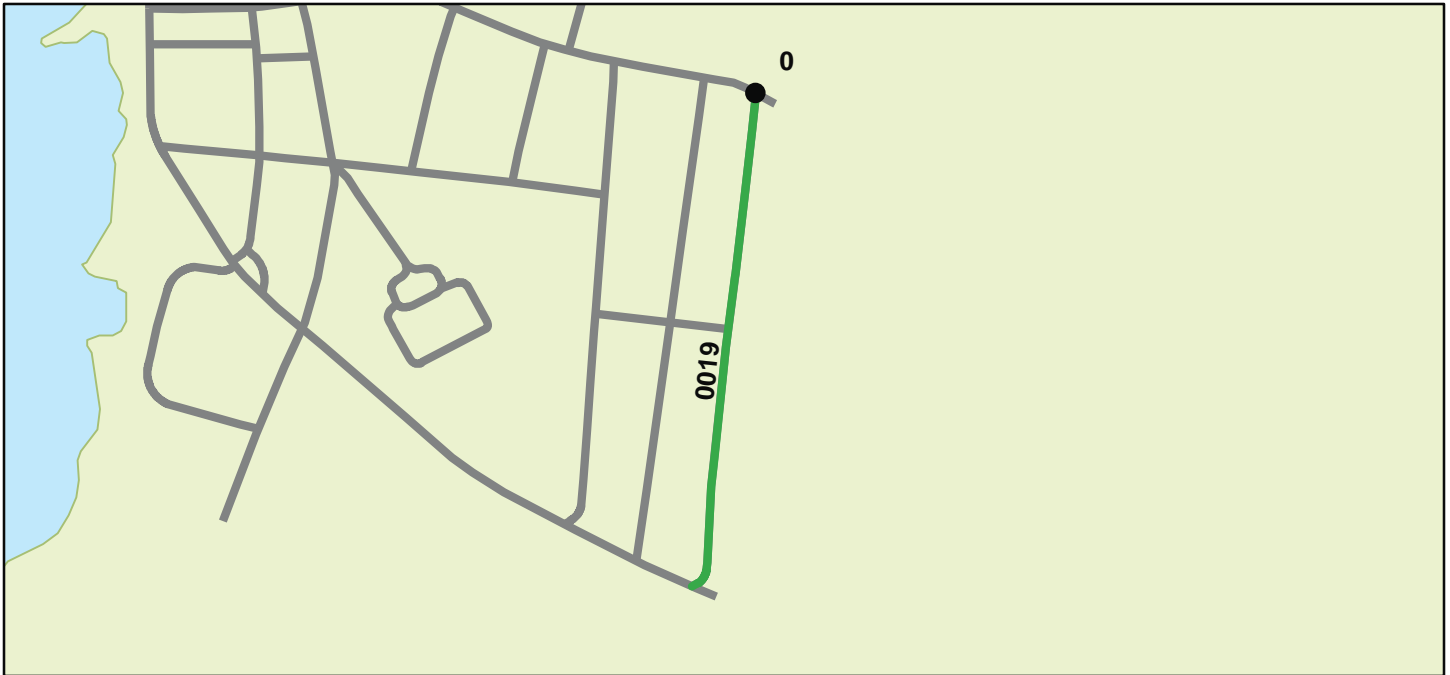
KALA\_0018\_7114.JPG



# Kalaupapa National Historical Park

## ROUTE 0019: KAIULANI STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.27     | <b>Section Length (MI)</b> | 0.27      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          | 94       | 94                         |           |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           | 94       | 94                         |           |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   | 94       | 94                         |           |      |           |                      |         |  |
| Transverse Cracking Index                                | 95       | 95                         |           |      |           |                      |         |  |
| Patching Index   | 100      | 100                        |           |      |           |                      |         |  |
| Rutting Index  | 100      | 100                        |           |      |           |                      |         |  |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |         |  |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                      |         |  |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                      |         |  |

# Kalaupapa National Historical Park

## ROUTE 0019: KAIULANI STREET

### Condition Photos



KALA\_0019\_7101.JPG



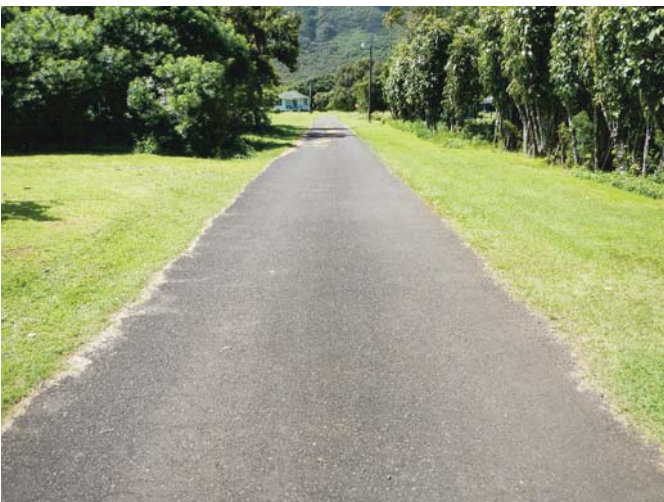
KALA\_0019\_7104.JPG



KALA\_0019\_7105.JPG



KALA\_0019\_7106.JPG



KALA\_0019\_7107.JPG

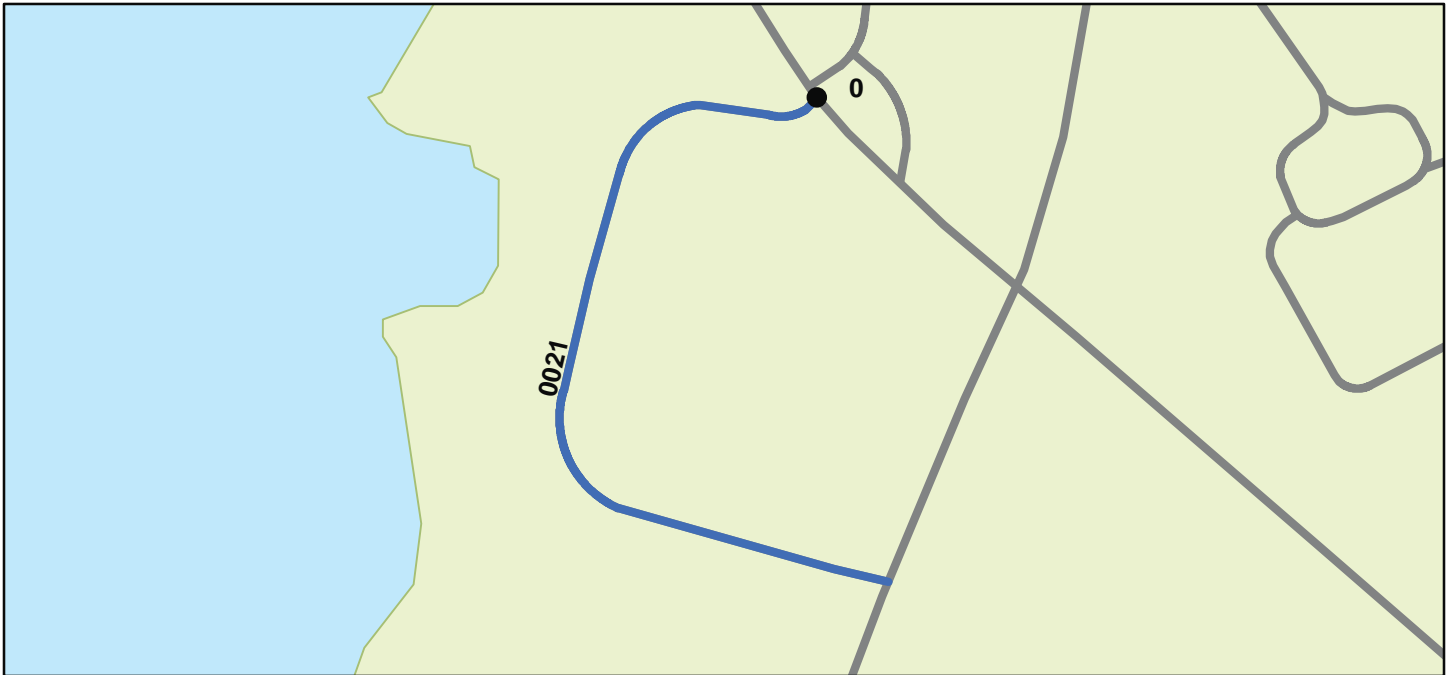


KALA\_0019\_7108.JPG

# Kalaupapa National Historical Park

## ROUTE 0021: BAYVIEW LOOP

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
|  |          |                            |           |      |           | No Data              |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.16     | <b>Section Length (MI)</b> | 0.16      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          | 97       | 97                         |           |      |           |                      |
| Surface Condition Rating (SCR)                           | 97       | 97                         |           |      |           |                      |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   | 97       | 97                         |           |      |           |                      |
| Transverse Cracking Index                                | 100      | 100                        |           |      |           |                      |
| Patching Index   | 100      | 100                        |           |      |           |                      |
| Rutting Index  | 100      | 100                        |           |      |           |                      |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |
| Paved Width (ft)   | 15       | 15                         |           |      |           |                      |
| Lane Width (ft)  | 15       | 15                         |           |      |           |                      |



# Kalaupapa National Historical Park

## ROUTE 0021: BAYVIEW LOOP

### Condition Photos



KALA\_0021\_7071.JPG



KALA\_0021\_7073.JPG



KALA\_0021\_7074.JPG



KALA\_0021\_7075.JPG

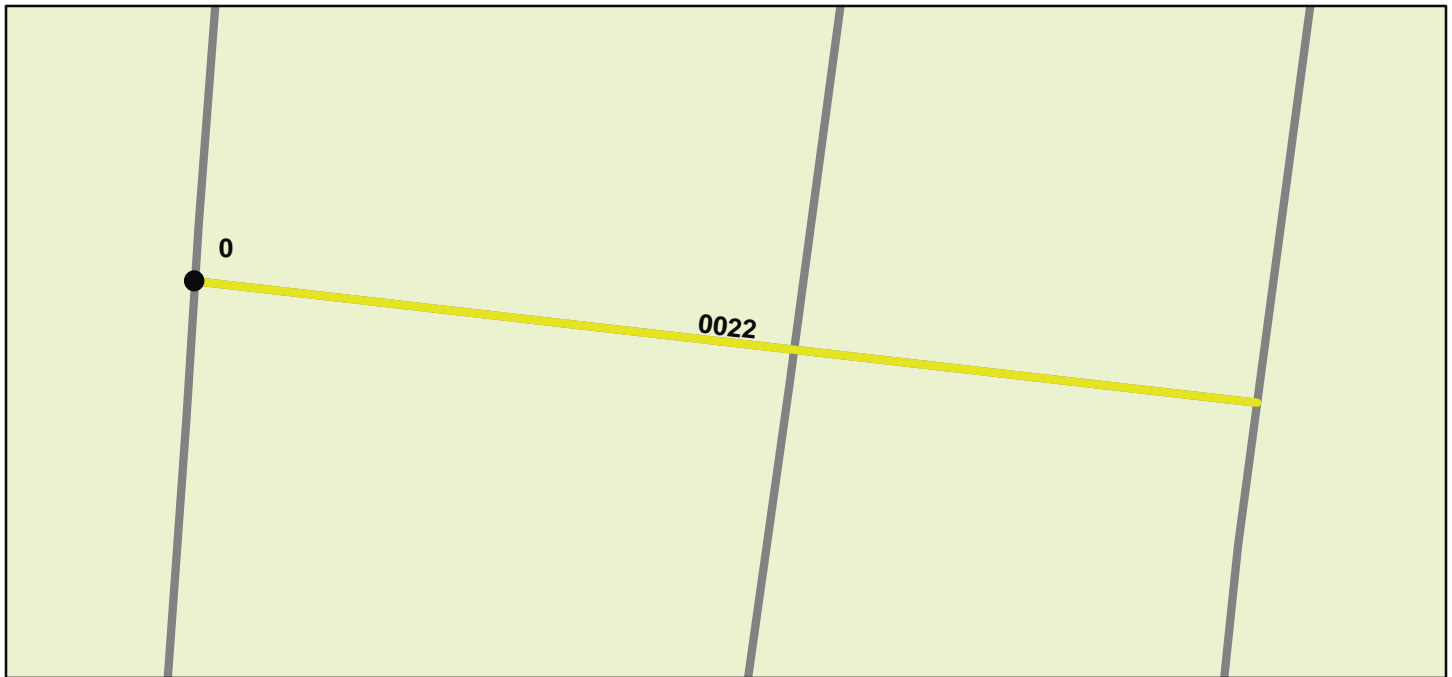


KALA\_0021\_7077.JPG

# Kalaupapa National Historical Park

## ROUTE 0022: HALEAKALA STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                              |
|--|----------|----------------------------|-----------|------|-----------|------------------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) No Data |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                              |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                              |
| <b>Paved Length (Miles):</b>                             | 0.07     | <b>Section Length (MI)</b> | 0.07      |      |           |                              |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                              |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                              |
| Pavement Condition Rating (PCR)                          | 79       | 79                         |           |      |           |                              |
| Surface Condition Rating (SCR)                           | 79       | 79                         |           |      |           |                              |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                              |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                              |
| Structural Crack Index                                   | 79       | 79                         |           |      |           |                              |
| Transverse Cracking Index                                | 92       | 92                         |           |      |           |                              |
| Patching Index   | 100      | 100                        |           |      |           |                              |
| Rutting Index  | 100      | 100                        |           |      |           |                              |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                              |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                              |
| Number of Lanes  | 1        | 1                          |           |      |           |                              |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                              |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                              |



# Kalaupapa National Historical Park

## ROUTE 0022: HALEAKALA STREET

### Condition Photos



KALA\_0022\_7124.JPG



KALA\_0022\_7126.JPG



KALA\_0022\_7127.JPG

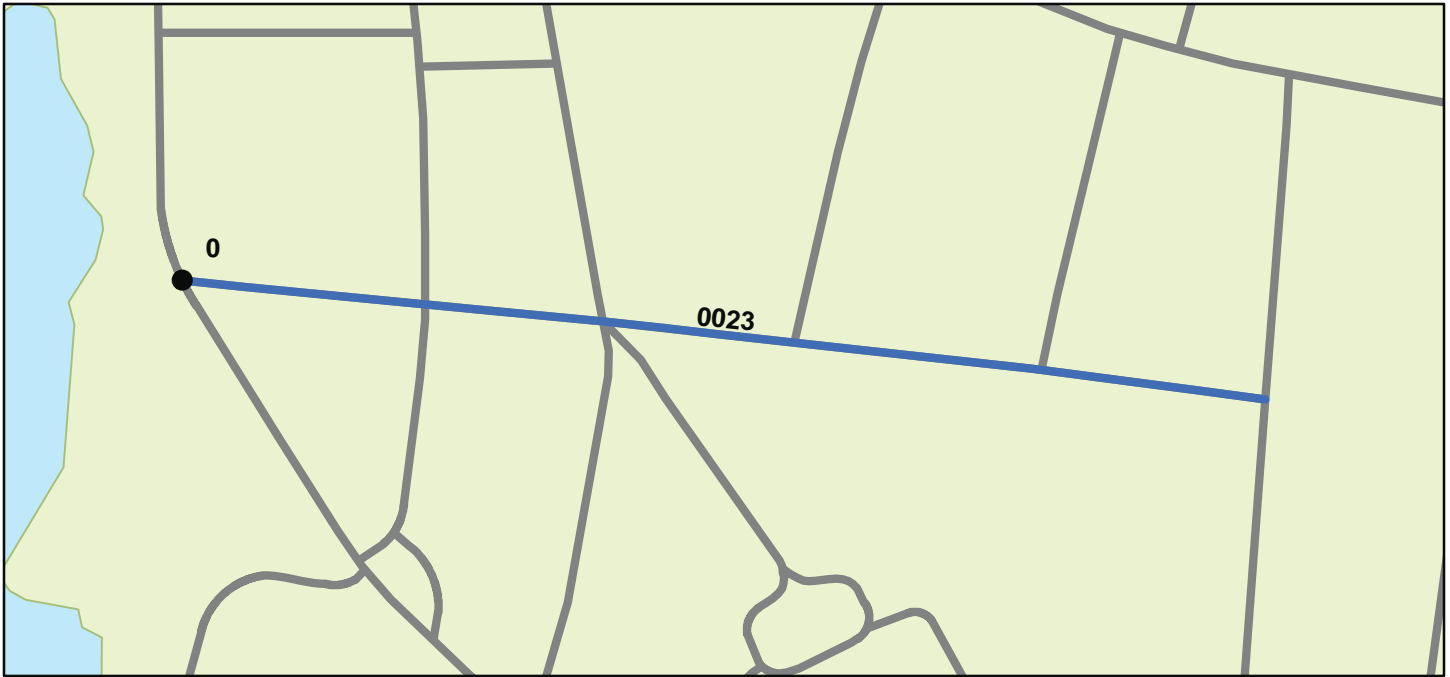


KALA\_0022\_7131.JPG

# Kalaupapa National Historical Park

## ROUTE 0023: SCHOOL STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.23     | <b>Section Length (MI)</b> | 0.23      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 97                         | 97        |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 97                         | 97        |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 97                         | 97        |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 97                         | 97        |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 13.8                       | 13.8      |      |           |                      |         |  |
| Lane Width (ft)  |          | 13.8                       | 13.8      |      |           |                      |         |  |



# Kalaupapa National Historical Park

## ROUTE 0023: SCHOOL STREET

### Condition Photos



KALA\_0023\_7049.JPG



KALA\_0023\_7051.JPG



KALA\_0023\_7052.JPG



KALA\_0023\_7056.JPG

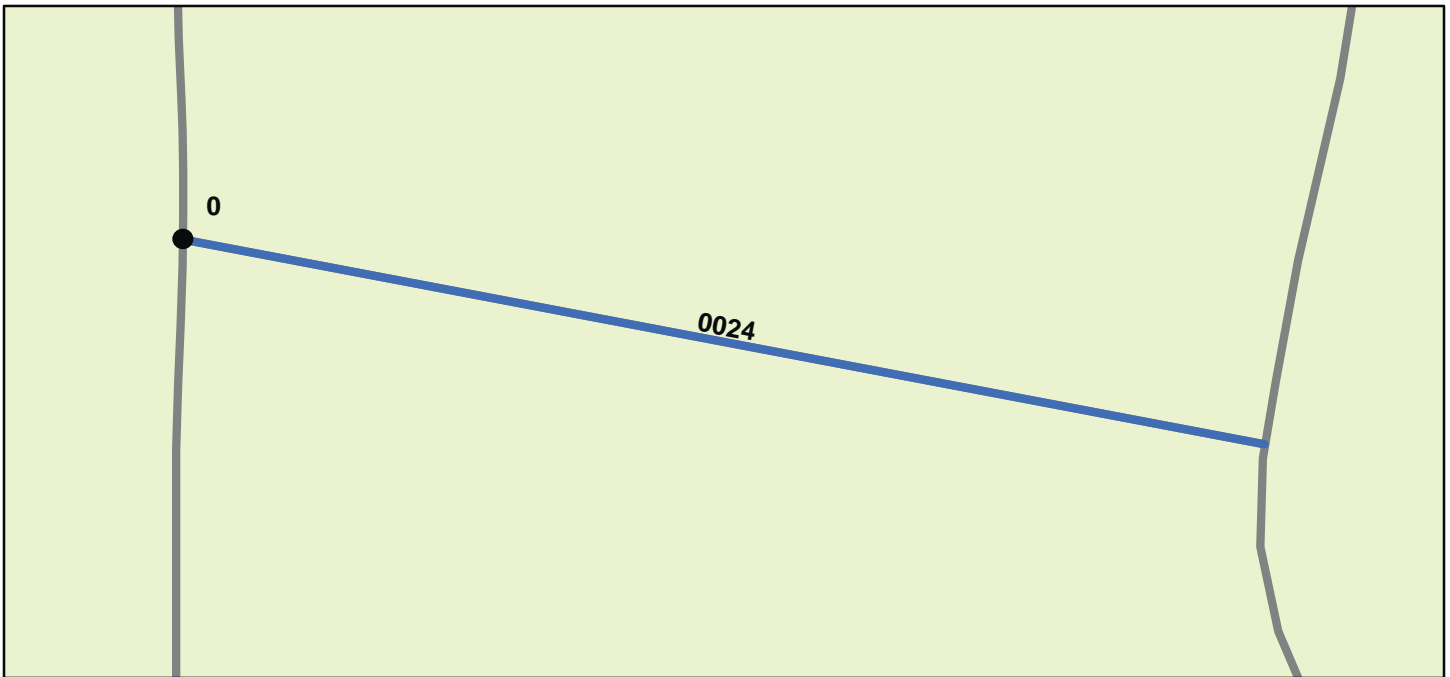


KALA\_0023\_7059.JPG

# Kalaupapa National Historical Park

## ROUTE 0024: KILOHANA STREET

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
|  |          |                            |           |      |           | No Data              |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.06     | <b>Section Length (MI)</b> | 0.06      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          | 100      | 100                        |           |      |           |                      |
| Surface Condition Rating (SCR)                           | 100      | 100                        |           |      |           |                      |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   | 100      | 100                        |           |      |           |                      |
| Transverse Cracking Index                                | 100      | 100                        |           |      |           |                      |
| Patching Index   | 100      | 100                        |           |      |           |                      |
| Rutting Index  | 100      | 100                        |           |      |           |                      |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                      |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                      |

# Kalaupapa National Historical Park

## ROUTE 0024: KILOHANA STREET

### Condition Photos



KALA\_0024\_7184.JPG



KALA\_0024\_7186.JPG



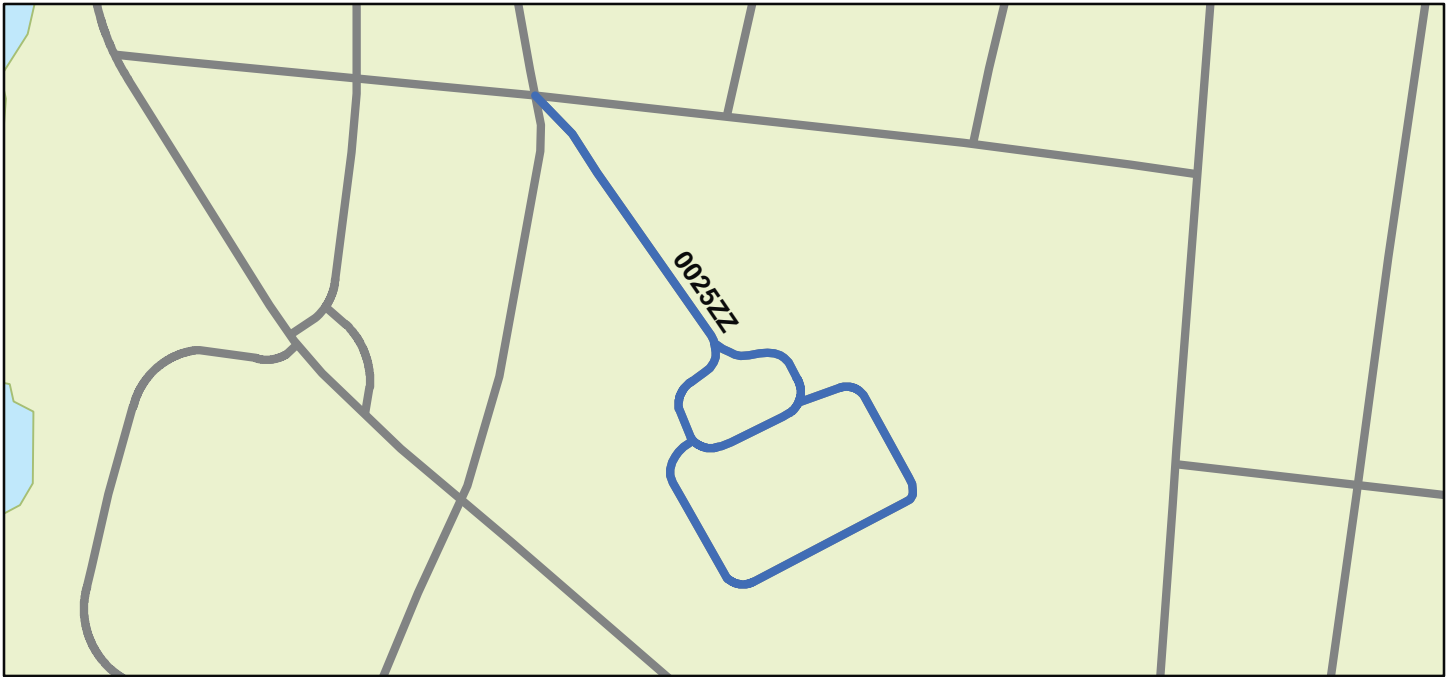
KALA\_0024\_7187.JPG



# Kalaupapa National Historical Park

## ROUTE 0025ZZ: BISHOP ROAD

### Summary Route



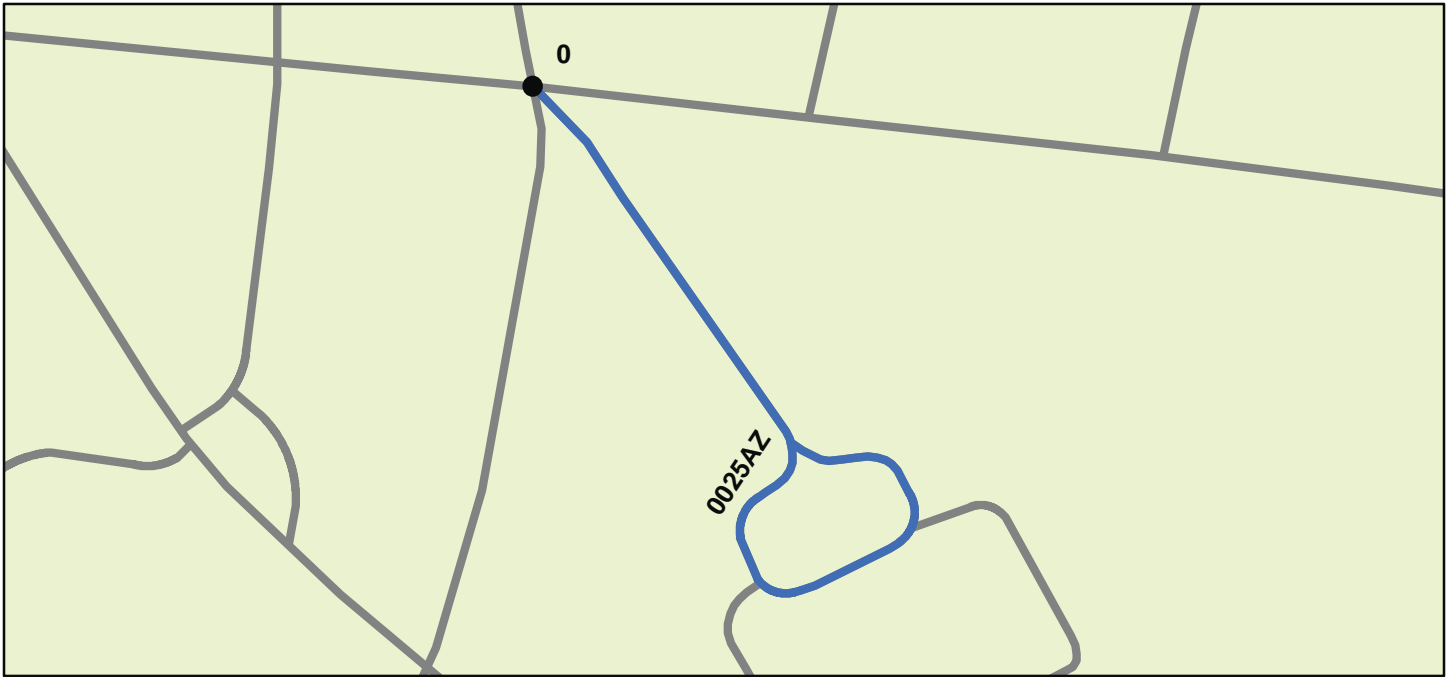
| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      |           |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.27     | <b>Section Length (MI)</b> |           |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 97                         |           |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 97                         |           |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        |           |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 98                         |           |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 99                         |           |      |           |                      |         |  |
| Patching Index   |          | 100                        |           |      |           |                      |         |  |
| Rutting Index  |          | 100                        |           |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        |           |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          |           |      |           |                      |         |  |
| Paved Width (ft)   |          | 14.9                       |           |      |           |                      |         |  |
| Lane Width (ft)  |          | 14.9                       |           |      |           |                      |         |  |

# Kalaupapa National Historical Park

## ROUTE 0025AZ: BISHOP ROAD (FRONT LOOP)

Subcomponent of KALA-0025ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
| No Data  |          |                            |           |      |           |                      |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.14     | <b>Section Length (MI)</b> | 0.14      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          | 96       | 96                         |           |      |           |                      |
| Surface Condition Rating (SCR)                           | 96       | 96                         |           |      |           |                      |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   | 96       | 96                         |           |      |           |                      |
| Transverse Cracking Index                                | 99       | 99                         |           |      |           |                      |
| Patching Index   | 100      | 100                        |           |      |           |                      |
| Rutting Index  | 100      | 100                        |           |      |           |                      |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |
| Paved Width (ft)   | 16.5     | 16.5                       |           |      |           |                      |
| Lane Width (ft)  | 16.5     | 16.5                       |           |      |           |                      |

# Kalaupapa National Historical Park

## ROUTE 0025AZ: BISHOP ROAD (FRONT LOOP)

### Condition Photos



KALA\_0025AZ\_7078.JPG



KALA\_0025AZ\_7079.JPG



KALA\_0025AZ\_7082.JPG



KALA\_0025AZ\_7083.JPG



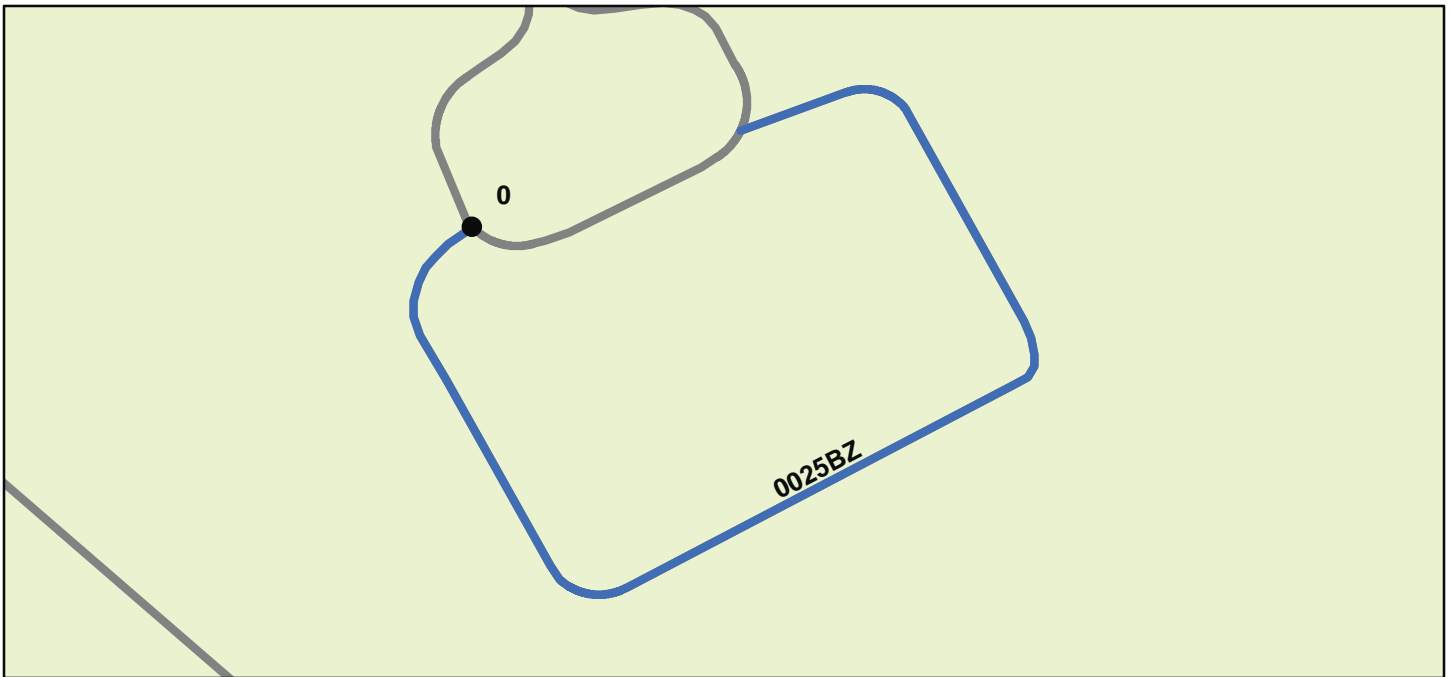
KALA\_0025AZ\_7084.JPG

# Kalaupapa National Historical Park

## ROUTE 0025BZ: BISHOP ROAD (BACK LOOP)

Subcomponent of KALA-0025ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.12     | <b>Section Length (MI)</b> | 0.12      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 100                        | 100       |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 99                         | 99        |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 13                         | 13        |      |           |                      |         |  |
| Lane Width (ft)  |          | 13                         | 13        |      |           |                      |         |  |



# Kalaupapa National Historical Park

## ROUTE 0025BZ: BISHOP ROAD (BACK LOOP)

### Condition Photos



KALA\_0025BZ\_7085.JPG



KALA\_0025BZ\_7087.JPG



KALA\_0025BZ\_7088.JPG



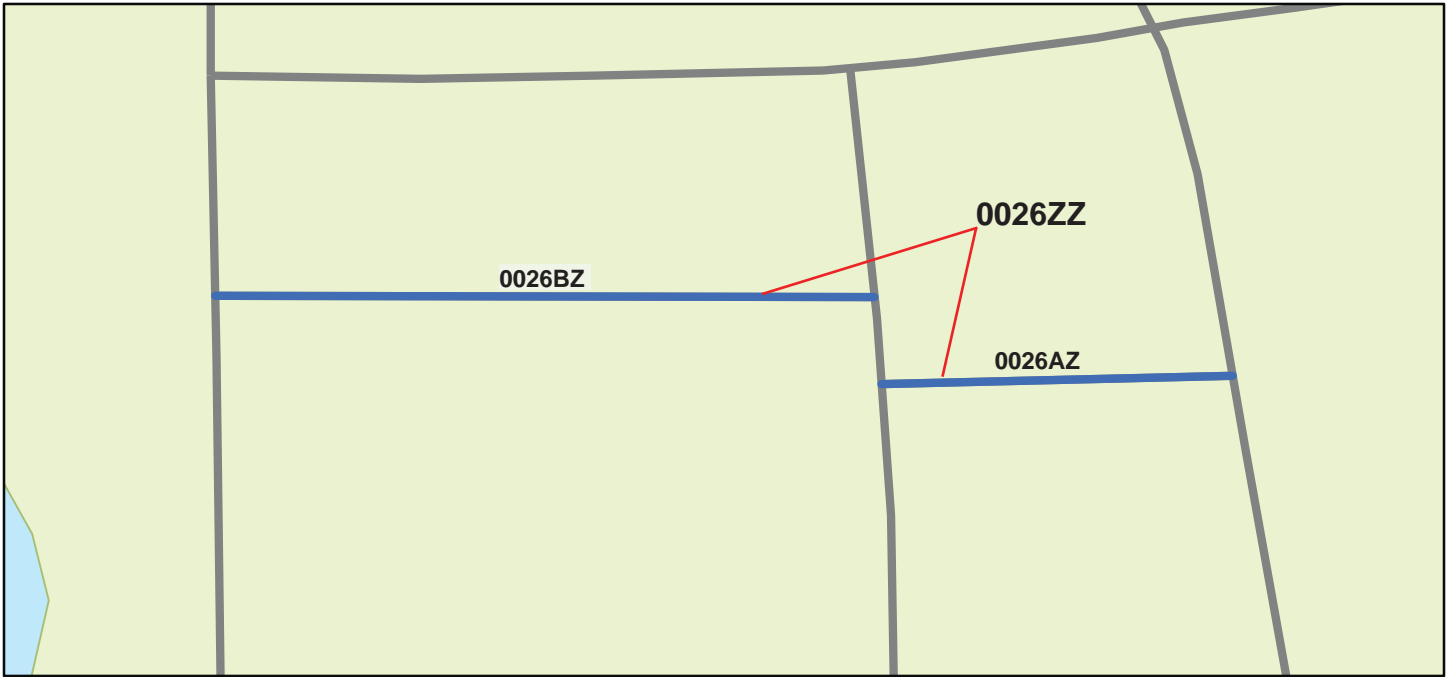
KALA\_0025BZ\_7089.JPG



# Kalaupapa National Historical Park

## ROUTE 0026ZZ: CONRADY PLACE AND MISSION / PUAHI CONNECTOR

### Summary Route



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |           |            |         |  |        |
|--|----------|----------------------------|-----------|------|-----------|-----------|------------|---------|--|--------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | No Data |  | N<br>↑ |
| See Appendix for definitions and formulas                |          |                            |           |      |           |           |            |         |  |        |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      |           |      |           |           |            |         |  |        |
| <b>Paved Length (Miles):</b>                             | 0.08     | <b>Section Length (MI)</b> |           |      |           |           |            |         |  |        |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |           |            |         |  |        |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |           |            |         |  |        |
| Pavement Condition Rating (PCR)                          |          | 100                        |           |      |           |           |            |         |  |        |
| Surface Condition Rating (SCR)                           |          | 100                        |           |      |           |           |            |         |  |        |
| Roughness Condition Index (RCI)                          |          | N/A                        |           |      |           |           |            |         |  |        |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |           |            |         |  |        |
| Structural Crack Index                                   |          | 100                        |           |      |           |           |            |         |  |        |
| Transverse Cracking Index                                |          | 100                        |           |      |           |           |            |         |  |        |
| Patching Index   |          | 100                        |           |      |           |           |            |         |  |        |
| Rutting Index  |          | 100                        |           |      |           |           |            |         |  |        |
| International Roughness Index (IRI)                      |          | N/A                        |           |      |           |           |            |         |  |        |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |           |            |         |  |        |
| Number of Lanes  |          | 1                          |           |      |           |           |            |         |  |        |
| Paved Width (ft)   |          | 21.4                       |           |      |           |           |            |         |  |        |
| Lane Width (ft)  |          | 21.4                       |           |      |           |           |            |         |  |        |

# Kalaupapa National Historical Park

## ROUTE 0026AZ: MISSION / PUAHI CONNECTOR

Subcomponent of KALA-0026ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.03     | <b>Section Length (MI)</b> | 0.03      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 99                         | 99        |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 12.7                       | 26        |      |           |                      |         |  |
| Lane Width (ft)  |          | 12.7                       | 26        |      |           |                      |         |  |

# Kalaupapa National Historical Park

## ROUTE 0026AZ: MISSION / PUAHI CONNECTOR

### Condition Photos



KALA\_0026AZ\_7041.JPG



KALA\_0026AZ\_7042.JPG



KALA\_0026AZ\_7043.JPG



KALA\_0026AZ\_7044.JPG



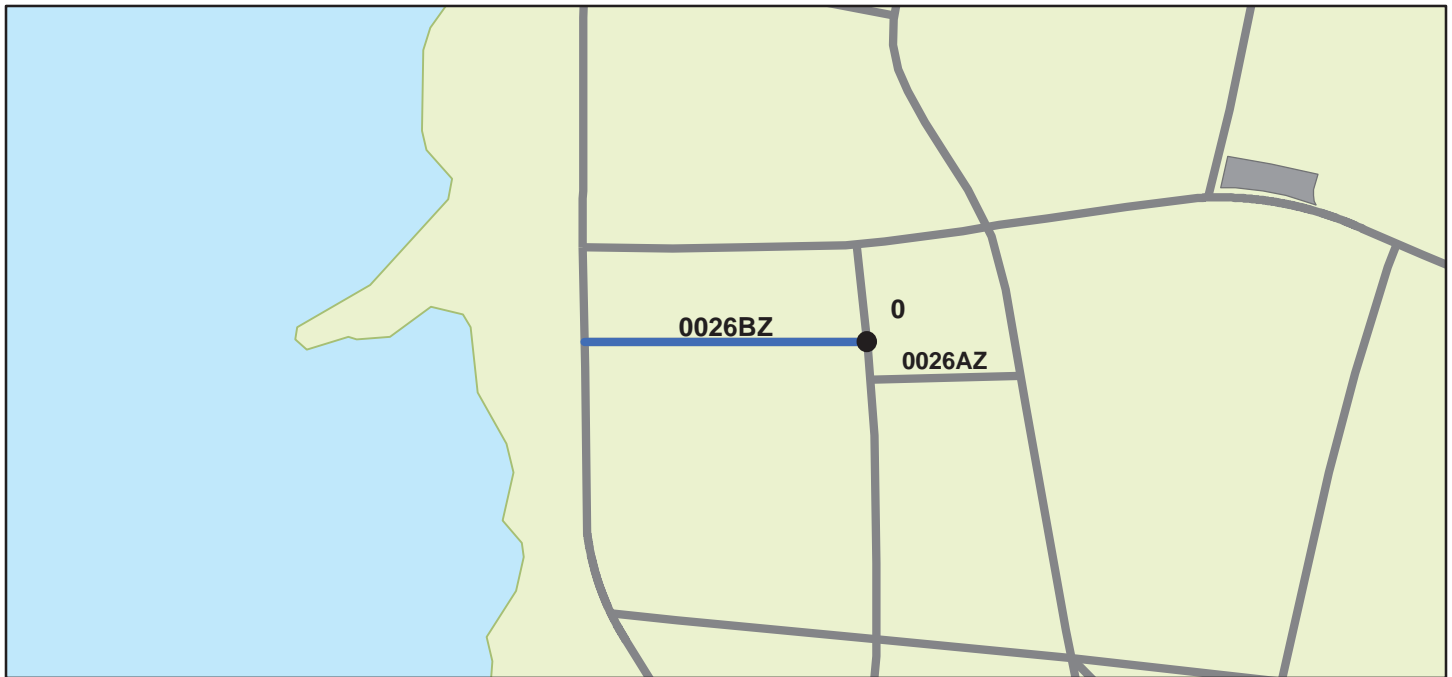
KALA\_0026AZ\_7045.JPG

# Kalaupapa National Historical Park

## ROUTE 0026BZ: CONRADY PLACE

Subcomponent of KALA-0026ZZ

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.05     | <b>Section Length (MI)</b> | 0.05      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 100                        | 100       |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 100                        | 100       |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 100                        | 100       |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 26                         | 26        |      |           |                      |         |  |
| Lane Width (ft)  |          | 26                         | 26        |      |           |                      |         |  |



# Kalaupapa National Historical Park

ROUTE 0026BZ: CONRADY PLACE

## Condition Photos



KALA\_0026BZ\_7046.JPG



KALA\_0026BZ\_7048.JPG



KALA\_0026BZ\_7060.JPG

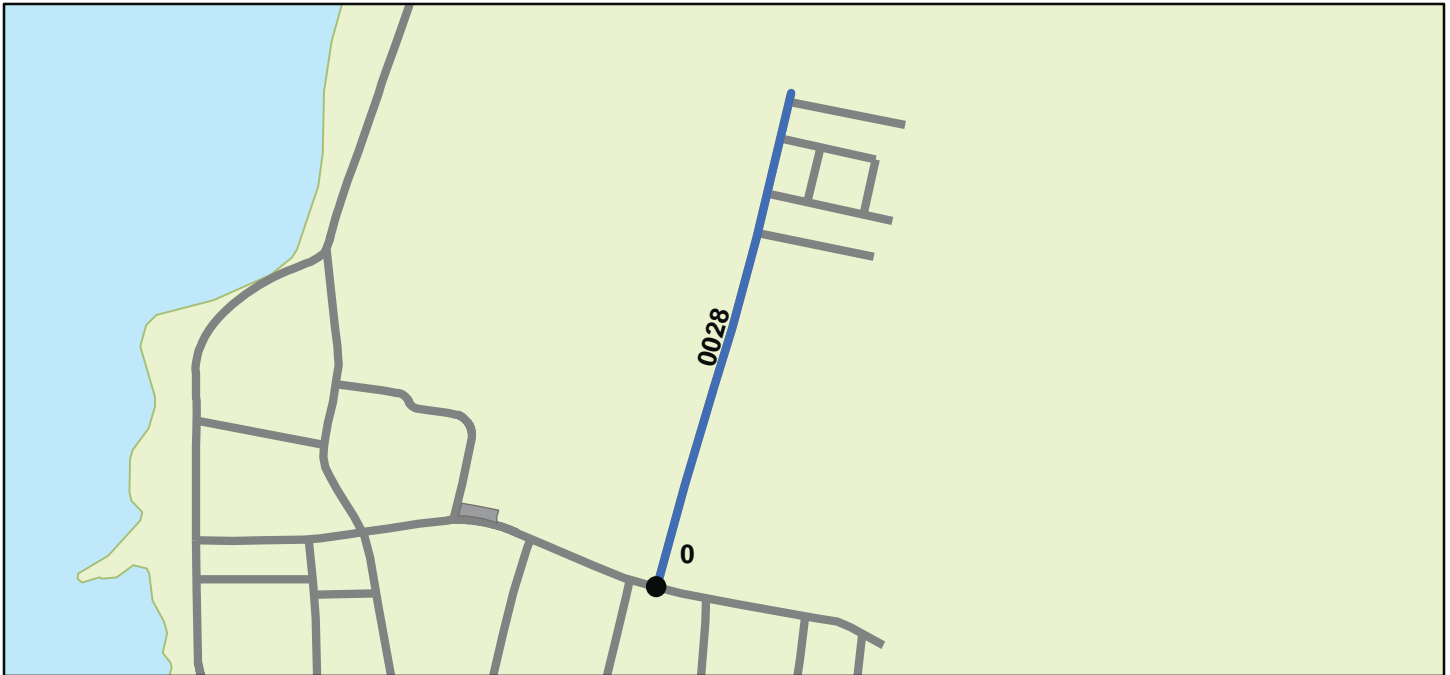


KALA\_0026BZ\_7061.JPG

# Kalaupapa National Historical Park

## ROUTE 0028: STAFF STREET (STAFF ROW)

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.26     | <b>Section Length (MI)</b> | 0.26      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 100                        | 100       |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 100                        | 100       |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 100                        | 100       |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 18                         | 18        |      |           |                      |         |  |
| Lane Width (ft)  |          | 18                         | 18        |      |           |                      |         |  |

# Kalaupapa National Historical Park

ROUTE 0028: STAFF STREET (STAFF ROW)

## Condition Photos



KALA\_0028\_7133.JPG



KALA\_0028\_7134.JPG



KALA\_0028\_7137.JPG

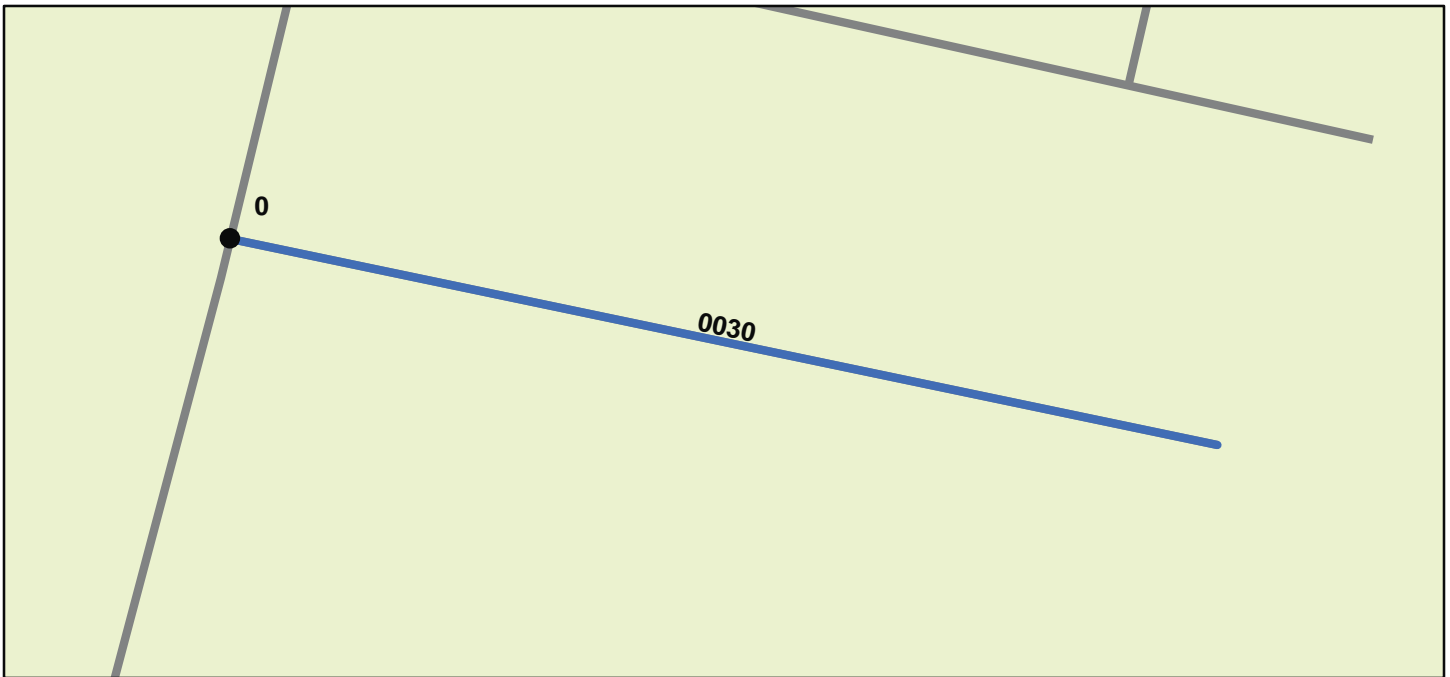


KALA\_0028\_7138.JPG

# Kalaupapa National Historical Park

ROUTE 0030: MCVEIGH STREET A

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.05     | <b>Section Length (MI)</b> | 0.05      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | 99                         | 99        |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 12                         | 12        |      |           |                      |         |  |
| Lane Width (ft)  |          | 12                         | 12        |      |           |                      |         |  |



# Kalaupapa National Historical Park

ROUTE 0030: MCVEIGH STREET A

## Condition Photos



KALA\_0030\_7169.JPG

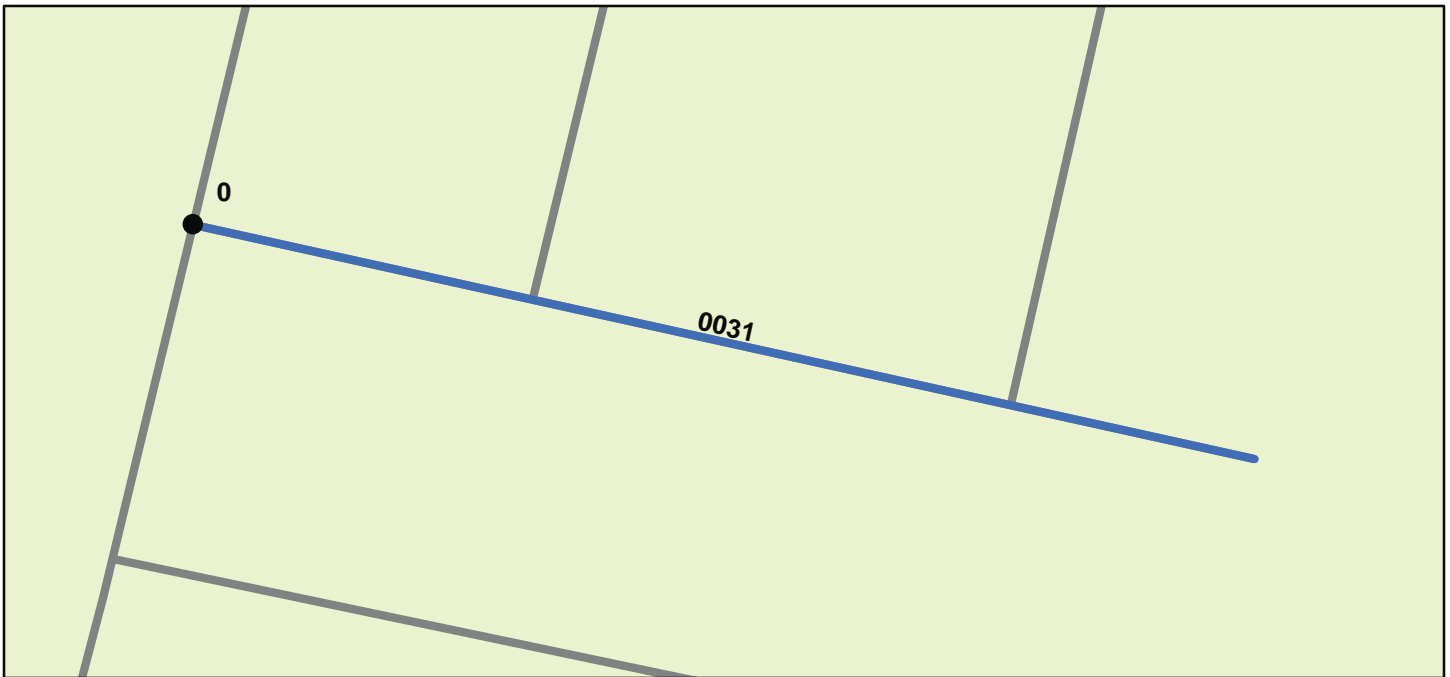


KALA\_0030\_7171.JPG

# Kalaupapa National Historical Park

## ROUTE 0031: MCVEIGH STREET B

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                              |
|--|----------|----------------------------|-----------|------|-----------|------------------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) No Data |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                              |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                              |
| <b>Paved Length (Miles):</b>                             | 0.06     | <b>Section Length (MI)</b> | 0.06      |      |           |                              |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                              |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                              |
| Pavement Condition Rating (PCR)                          | 99       | 99                         |           |      |           |                              |
| Surface Condition Rating (SCR)                           | 99       | 99                         |           |      |           |                              |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                              |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                              |
| Structural Crack Index                                   | 99       | 99                         |           |      |           |                              |
| Transverse Cracking Index                                | 100      | 100                        |           |      |           |                              |
| Patching Index   | 100      | 100                        |           |      |           |                              |
| Rutting Index  | 100      | 100                        |           |      |           |                              |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                              |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                              |
| Number of Lanes  | 1        | 1                          |           |      |           |                              |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                              |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                              |

# Kalaupapa National Historical Park

## ROUTE 0031: MCVEIGH STREET B

### Condition Photos



KALA\_0031\_7160.JPG



KALA\_0031\_7161.JPG



KALA\_0031\_7162.JPG



KALA\_0031\_7163.JPG

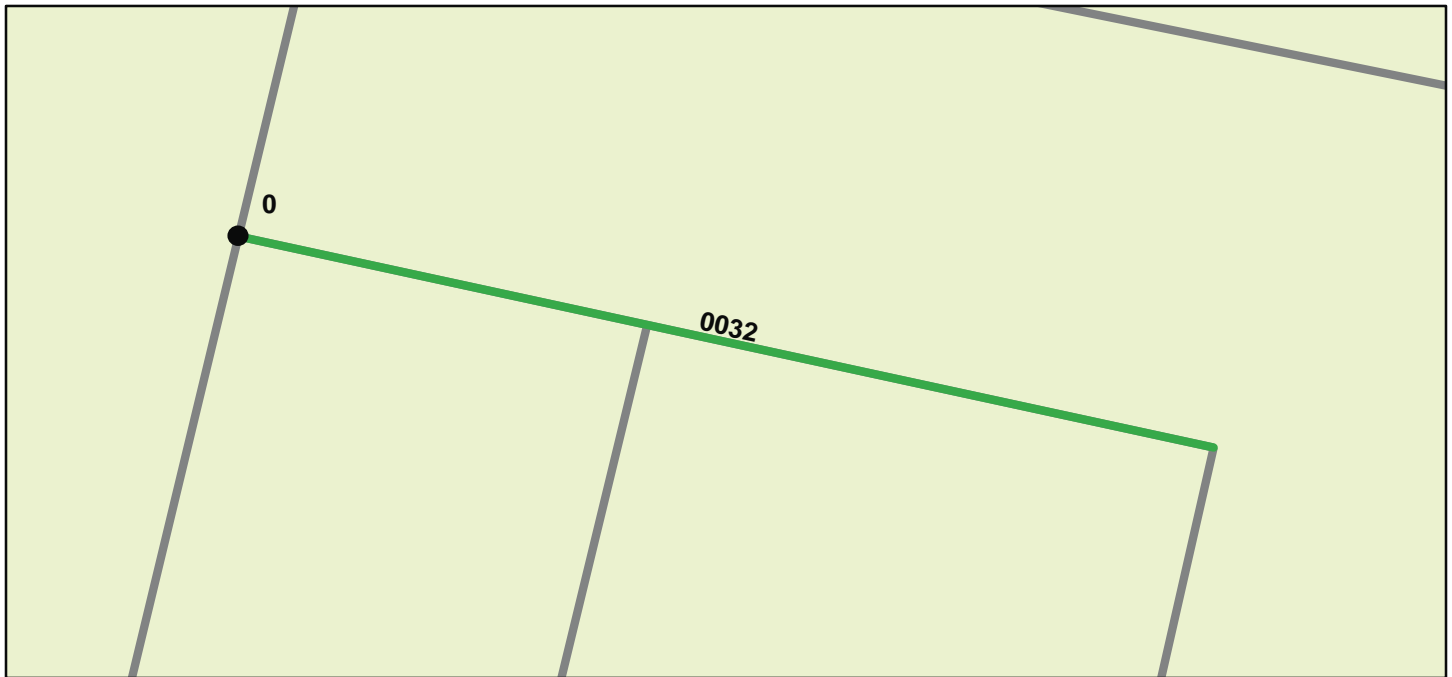


KALA\_0031\_7164.JPG

# Kalaupapa National Historical Park

## ROUTE 0032: MCVEIGH STREET C

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                              |
|--|----------|----------------------------|-----------|------|-----------|------------------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) No Data |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                              |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                              |
| <b>Paved Length (Miles):</b>                             | 0.04     | <b>Section Length (MI)</b> | 0.04      |      |           |                              |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                              |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                              |
| Pavement Condition Rating (PCR)                          | 90       | 90                         |           |      |           |                              |
| Surface Condition Rating (SCR)                           | 90       | 90                         |           |      |           |                              |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                              |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                              |
| Structural Crack Index                                   | 98       | 98                         |           |      |           |                              |
| Transverse Cracking Index                                | 90       | 90                         |           |      |           |                              |
| Patching Index   | 100      | 100                        |           |      |           |                              |
| Rutting Index  | 100      | 100                        |           |      |           |                              |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                              |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                              |
| Number of Lanes  | 1        | 1                          |           |      |           |                              |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                              |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                              |



# Kalaupapa National Historical Park

## ROUTE 0032: MCVEIGH STREET C

### Condition Photos



KALA\_0032\_7150.JPG



KALA\_0032\_7152.JPG



KALA\_0032\_7153.JPG

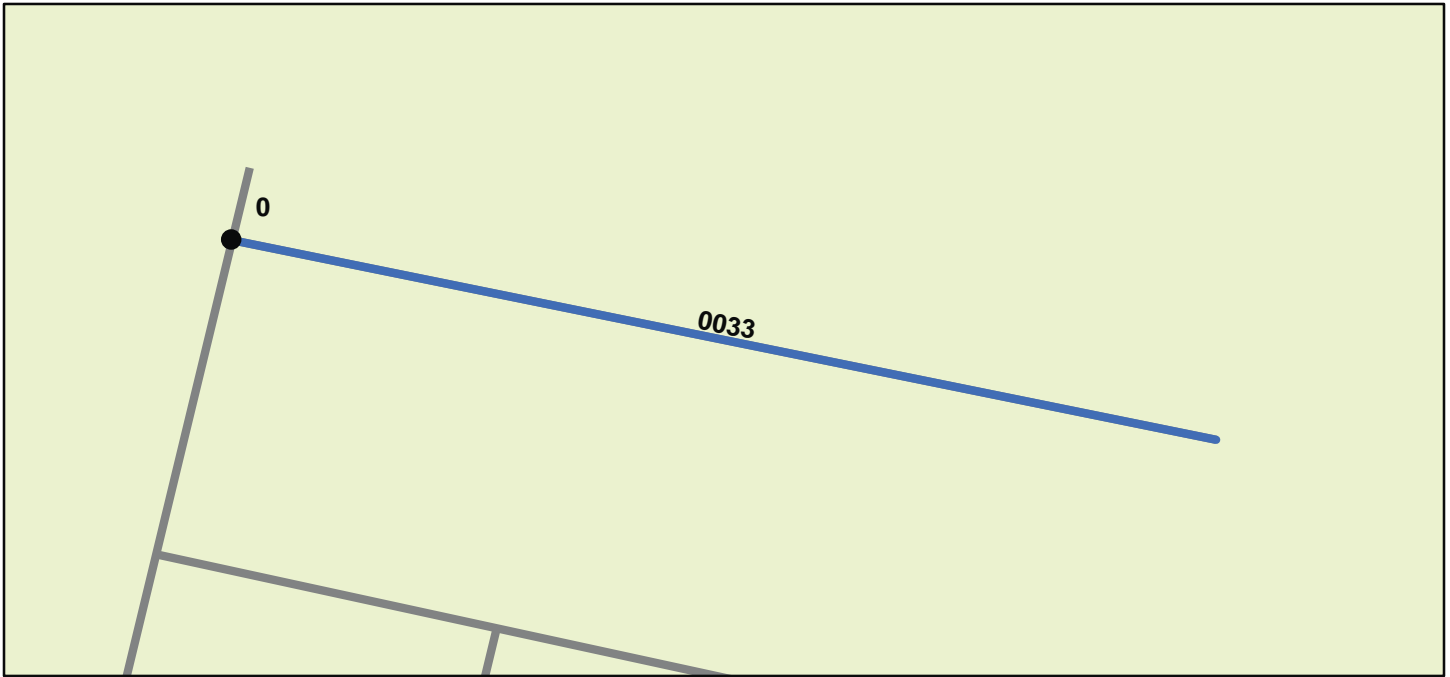


KALA\_0032\_7154.JPG

# Kalaupapa National Historical Park

ROUTE 0033: MCVEIGH STREET D

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                              |
|--|----------|----------------------------|-----------|------|-----------|------------------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) No Data |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                              |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                              |
| <b>Paved Length (Miles):</b>                             | 0.05     | <b>Section Length (MI)</b> | 0.05      |      |           |                              |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                              |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                              |
| Pavement Condition Rating (PCR)                          |          | 99                         | 99        |      |           |                              |
| Surface Condition Rating (SCR)                           |          | 99                         | 99        |      |           |                              |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                              |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                              |
| Structural Crack Index                                   |          | 99                         | 99        |      |           |                              |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                              |
| Patching Index   |          | 100                        | 100       |      |           |                              |
| Rutting Index  |          | 100                        | 100       |      |           |                              |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                              |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                              |
| Number of Lanes  |          | 1                          | 1         |      |           |                              |
| Paved Width (ft)   |          | 12                         | 12        |      |           |                              |
| Lane Width (ft)  |          | 12                         | 12        |      |           |                              |



# Kalaupapa National Historical Park

## ROUTE 0033: MCVEIGH STREET D

### Condition Photos



KALA\_0033\_7145.JPG



KALA\_0033\_7146.JPG



KALA\_0033\_7147.JPG



KALA\_0033\_7148.JPG

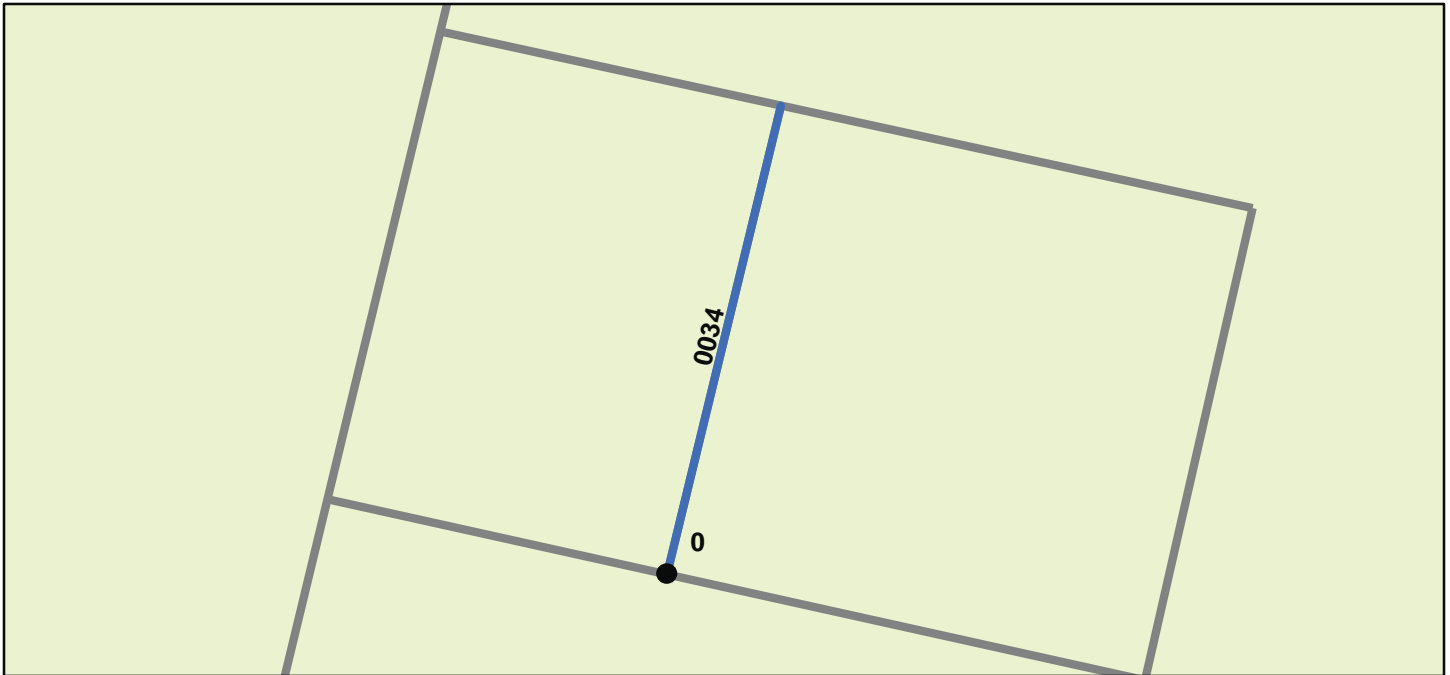


KALA\_0033\_7149.JPG

# Kalaupapa National Historical Park

## ROUTE 0034: MCVEIGH STREET E

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |
|--|----------|----------------------------|-----------|------|-----------|----------------------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) |
| No Data  |          |                            |           |      |           |                      |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |                      |
| <b>Paved Length (Miles):</b>                             | 0.03     | <b>Section Length (MI)</b> | 0.03      |      |           |                      |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |
| Pavement Condition Rating (PCR)                          | 100      | 100                        |           |      |           |                      |
| Surface Condition Rating (SCR)                           | 100      | 100                        |           |      |           |                      |
| Roughness Condition Index (RCI)                          | N/A      | N/A                        |           |      |           |                      |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |
| Structural Crack Index                                   | 100      | 100                        |           |      |           |                      |
| Transverse Cracking Index                                | 100      | 100                        |           |      |           |                      |
| Patching Index   | 100      | 100                        |           |      |           |                      |
| Rutting Index  | 100      | 100                        |           |      |           |                      |
| International Roughness Index (IRI)                      | N/A      | N/A                        |           |      |           |                      |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |
| Number of Lanes  | 1        | 1                          |           |      |           |                      |
| Paved Width (ft)   | 12       | 12                         |           |      |           |                      |
| Lane Width (ft)  | 12       | 12                         |           |      |           |                      |



# Kalaupapa National Historical Park

ROUTE 0034: MCVEIGH STREET E

## Condition Photos



KALA\_0034\_7155.JPG



KALA\_0034\_7156.JPG



KALA\_0034\_7157.JPG

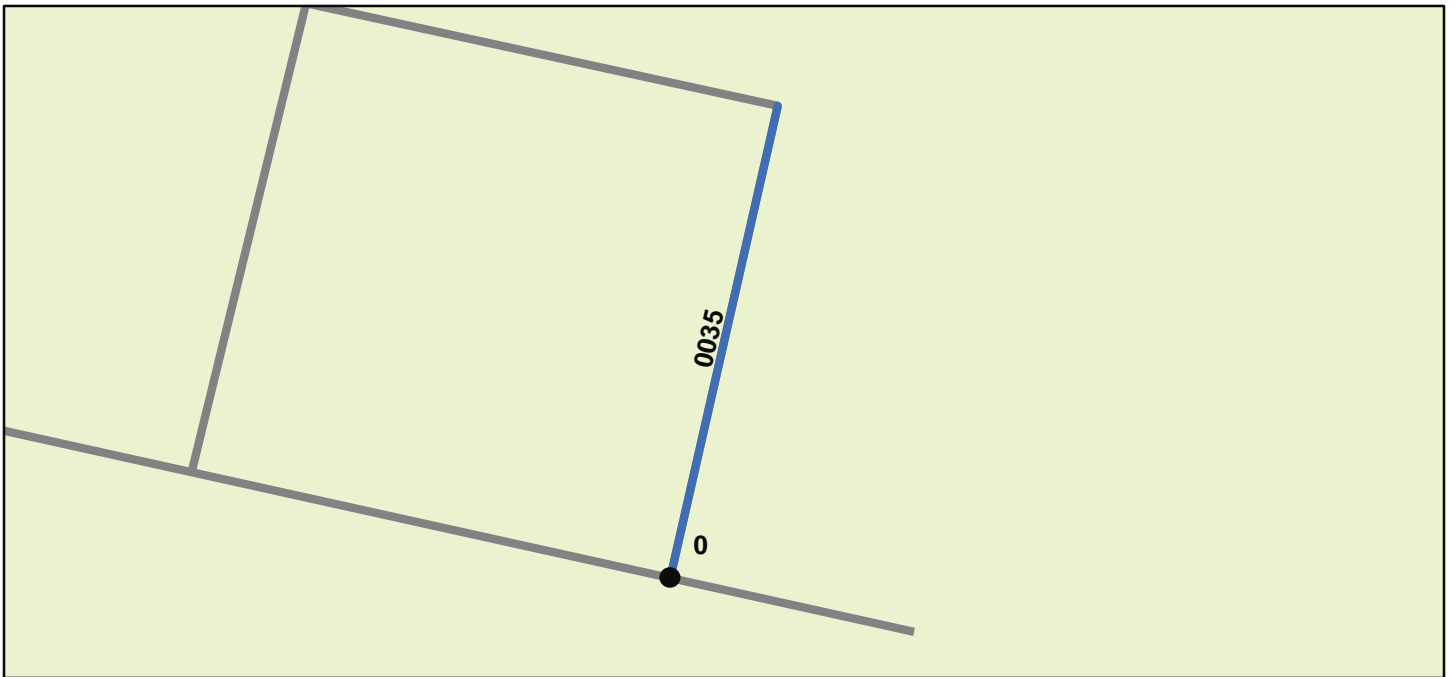


KALA\_0034\_7158.JPG

# Kalaupapa National Historical Park

## ROUTE 0035: MCVEIGH STREET F

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |           |            |         |  |       |
|--|----------|----------------------------|-----------|------|-----------|-----------|------------|---------|--|-------|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent | (95 - 100) | No Data |  | N<br> |
| See Appendix for definitions and formulas                |          |                            |           |      |           |           |            |         |  |       |
| <b>Inspection Date:</b>                                  | 4/4/2014 | <b>Section Number</b>      | 0         |      |           |           |            |         |  |       |
| <b>Paved Length (Miles):</b>                             | 0.03     | <b>Section Length (MI)</b> | 0.03      |      |           |           |            |         |  |       |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |           |            |         |  |       |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |           |            |         |  |       |
| Pavement Condition Rating (PCR)                          |          | 98                         | 98        |      |           |           |            |         |  |       |
| Surface Condition Rating (SCR)                           |          | 98                         | 98        |      |           |           |            |         |  |       |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |           |            |         |  |       |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |           |            |         |  |       |
| Structural Crack Index                                   |          | 98                         | 98        |      |           |           |            |         |  |       |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |           |            |         |  |       |
| Patching Index   |          | 100                        | 100       |      |           |           |            |         |  |       |
| Rutting Index  |          | 100                        | 100       |      |           |           |            |         |  |       |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |           |            |         |  |       |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |           |            |         |  |       |
| Number of Lanes  |          | 1                          | 1         |      |           |           |            |         |  |       |
| Paved Width (ft)   |          | 12                         | 12        |      |           |           |            |         |  |       |
| Lane Width (ft)  |          | 12                         | 12        |      |           |           |            |         |  |       |



# Kalaupapa National Historical Park

ROUTE 0035: MCVEIGH STREET F

## Condition Photos



KALA\_0035\_7165.JPG



KALA\_0035\_7166.JPG



KALA\_0035\_7167.JPG

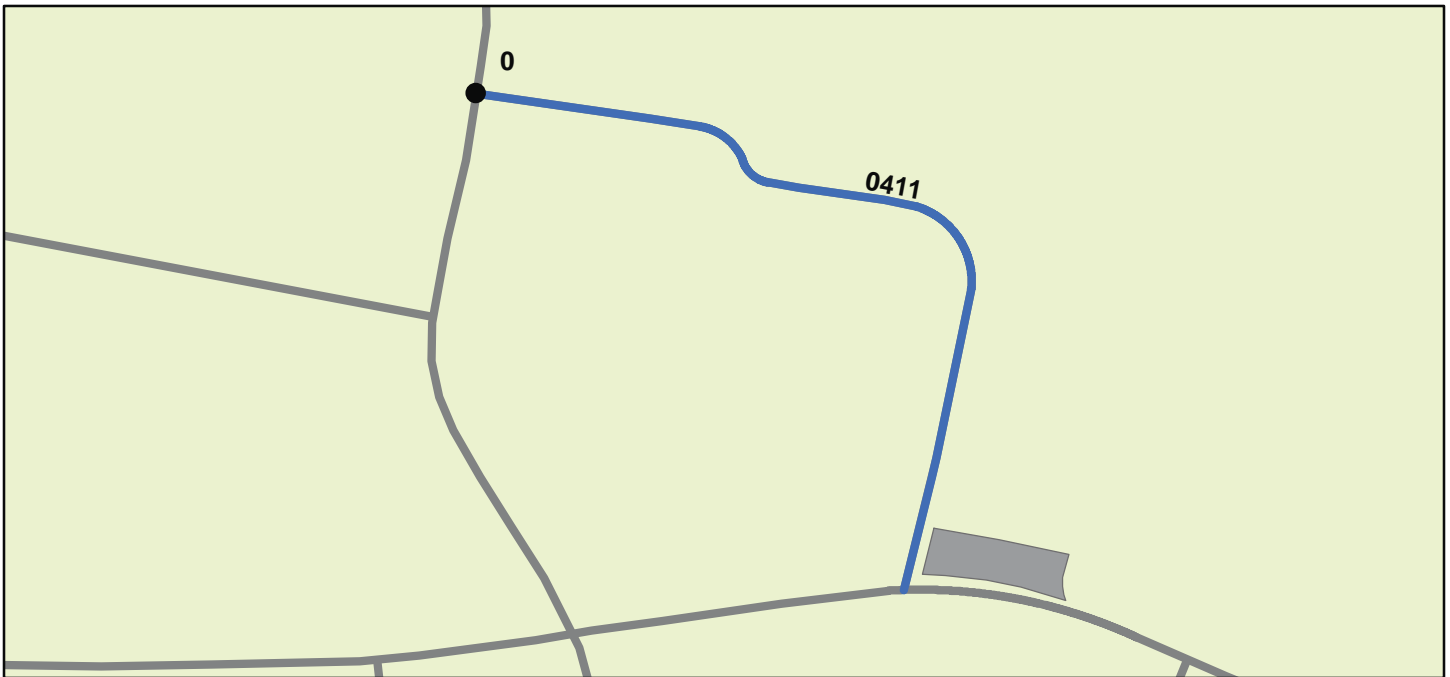


KALA\_0035\_7168.JPG

# Kalaupapa National Historical Park

## ROUTE 0411: INDUSTRIAL ROAD

Manual Rating



| Route Condition Legend – Pavement Condition Rating (PCR) |          |                            |           |      |           |                      |         |  |
|--|----------|----------------------------|-----------|------|-----------|----------------------|---------|--|
| Poor   | (0 - 60) | Fair                       | (61 - 84) | Good | (85 - 94) | Excellent (95 - 100) | No Data |  |
| See Appendix for definitions and formulas                |          |                            |           |      |           |                      |         |  |
| <b>Inspection Date:</b>                                  | 4/5/2014 | <b>Section Number</b>      | 0         |      |           |                      |         |  |
| <b>Paved Length (Miles):</b>                             | 0.12     | <b>Section Length (MI)</b> | 0.12      |      |           |                      |         |  |
| <b>Surface Type:</b>                                     | ASPHALT  | <b>Route Summary</b>       |           |      |           |                      |         |  |
| <b>Roadway Condition Information</b>                     |          |                            |           |      |           |                      |         |  |
| Pavement Condition Rating (PCR)                          |          | 100                        | 100       |      |           |                      |         |  |
| Surface Condition Rating (SCR)                           |          | 100                        | 100       |      |           |                      |         |  |
| Roughness Condition Index (RCI)                          |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Distress Index Values</b>                             |          |                            |           |      |           |                      |         |  |
| Structural Crack Index                                   |          | N/A                        | 100       |      |           |                      |         |  |
| Transverse Cracking Index                                |          | 100                        | 100       |      |           |                      |         |  |
| Patching Index   |          | 100                        | 100       |      |           |                      |         |  |
| Rutting Index  |          | 100                        | 100       |      |           |                      |         |  |
| International Roughness Index (IRI)                      |          | N/A                        | N/A       |      |           |                      |         |  |
| <b>Lane &amp; Width Information</b>                      |          |                            |           |      |           |                      |         |  |
| Number of Lanes  |          | 1                          | 1         |      |           |                      |         |  |
| Paved Width (ft)   |          | 15                         | 15        |      |           |                      |         |  |
| Lane Width (ft)  |          | 15                         | 15        |      |           |                      |         |  |



# Kalaupapa National Historical Park

## ROUTE 0411: INDUSTRIAL ROAD

### Condition Photos



KALA\_0411\_7216.JPG



KALA\_0411\_7217.JPG



KALA\_0411\_7218.JPG



KALA\_0411\_7220.JPG

**Section 7**  
**Parking Area**  
**Condition Rating Sheets**



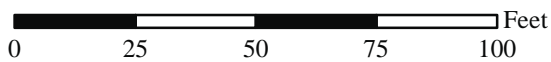
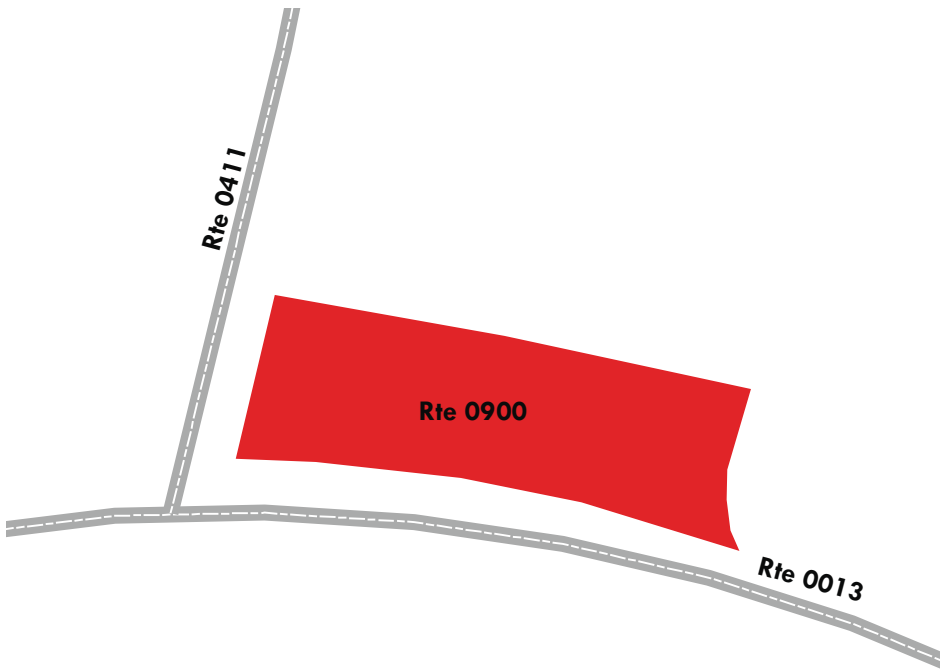
**Kalaupapa National Historical Park**



**Federal Lands Highway  
Road Inventory Program**

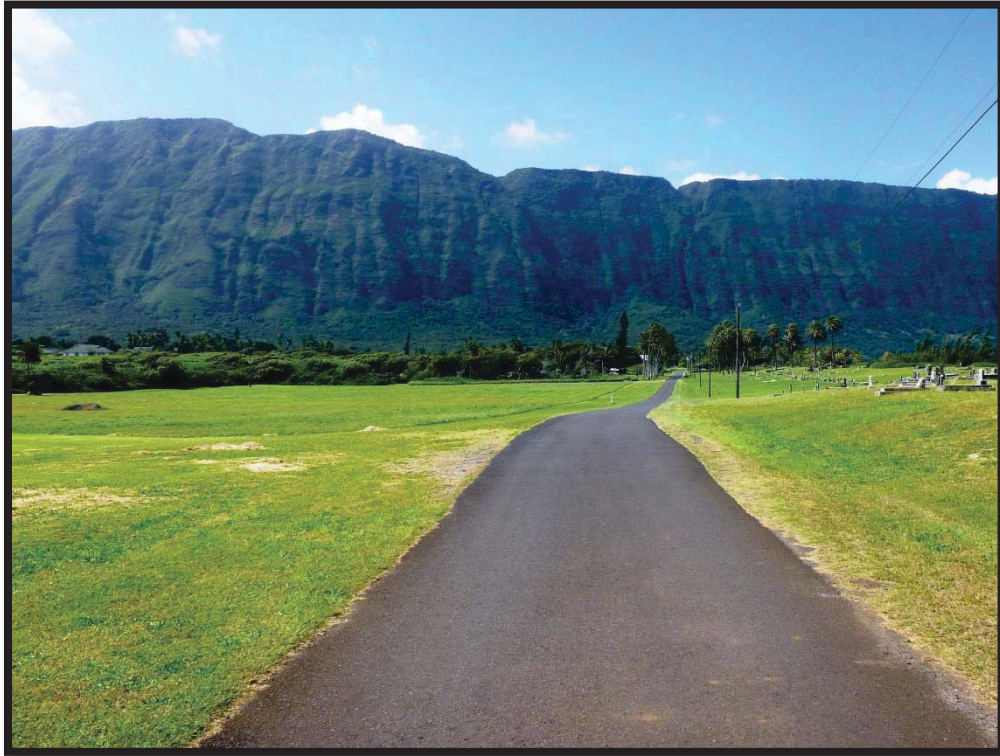
**KALAUPAPA NATIONAL HISTORICAL PARK  
 ROUTE 0900: PASCHOAL HALL PARKING  
 ADJACENT TO ROUTE 0013 (BERETANIA STREET)**

| INSPECTION DATE | USER ACCESS | SURFACE TYPE | AREA (SQ. FT.) | LANE MILES | FMSS NUMBER            |
|-----------------|-------------|--------------|----------------|------------|------------------------|
| 4/4/2014        | PUBLIC      | ASPHALT      | 2,991          | 0.051      | N/A                    |
| CULVERTS        | DROP INLETS | GATES        | CURB & GUTTER  | CURB       | CONDITION RATING / PCR |
| 0               | 0           | 0            | NO             | CONCRETE   | GOOD / 90              |





**Section 8**  
**Route Maintenance**  
**Features Summaries**



**Kalaupapa National Historical Park**



**Federal Lands Highway**  
**Road Inventory Program**



# KALA: PARKWIDE MAINTENANCE FEATURES SUMMARY

Includes MRL & PKG Routes collected in Cycle 5

Note: ALL features were inventoried by RIP in KALA for Manually Rated Roads. ONLY culverts, drop inlets, and gates were collected on Parking areas. The features totals are reflected below.

| FEATURE            | LINEAR FEET | COUNT |
|--------------------|-------------|-------|
| BRIDGE             | --          | 1     |
| CATTLE GUARD       | --          | 1     |
| CULVERT            | --          | 2     |
| CURB               | 6,151       | --    |
| DROP INLET         | --          | 5     |
| GATE               | --          | 0     |
| GUARD/GUIDE RAIL   | 0           | --    |
| CABLE              | 0           | --    |
| NON-CABLE          | 0           | --    |
| GUARD/GUIDE WALL   | 0           | --    |
| BOLLARD            | 0           | --    |
| TEMPORARY BARRIER  | 0           | --    |
| NON TEMP/BOLLARD   | 0           | --    |
| INTERSECTION       | --          | 178   |
| LOW WATER CROSSING | --          | 0     |
| LOW WATER CROSSING | 0           | --    |
| MILE MARKER        | --          | 0     |
| OVERPASS           | --          | 0     |
| PARK BOUNDARY      | --          | 0     |
| PAVED DITCH        | 0           | --    |
| PULLOUT            | --          | 0     |
| PULLOUT            | 0           | --    |
| RAILROAD CROSSING  | --          | 0     |
| RETAINING WALL     | --          | 1     |
| RETAINING WALL     | 32          | --    |
| SIGN               | --          | 60    |
| STATE BOUNDARY     | --          | 0     |
| TRAFFIC LIGHT      | --          | 0     |
| TUNNEL             | --          | 0     |
| TUNNEL             | 0           | --    |

*Date Collected 04/05/2014*

## KALA: ROUTE MAINTENANCE FEATURES SUMMARY

| FEATURE            | ROUTE 0010ZZ<br>KAMEHAMEHA STREET | ROUTE 0011<br>PUAHI STREET | ROUTE 0012<br>DAMIEN STREET | ROUTE 0013<br>BERETANIA STREET | ROUTE 0014ZZ<br>MISSION STREET | ROUTE 0015<br>GOODHUE STREET | UNIT        |
|--------------------|-----------------------------------|----------------------------|-----------------------------|--------------------------------|--------------------------------|------------------------------|-------------|
| BRIDGE             | 0                                 | 1                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| CATTLE GUARD       | 1                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| CULVERT            | 1                                 | 1                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| CURB               | 0                                 | 0                          | 5                           | 0                              | 0                              | 0                            | LINEAR FEET |
| DROP INLET         | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| GATE               | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| GUARD/GUIDE RAIL   | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| CABLE              | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| NON-CABLE          | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| GUARD/GUIDE WALL   | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| BOLLARD            | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| TEMPORARY BARRIER  | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| NON TEMP/BOLLARD   | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| INTERSECTION       | 15                                | 14                         | 12                          | 15                             | 13                             | 4                            | EACH        |
| LOW WATER CROSSING | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| LOW WATER CROSSING | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| MILE MARKER        | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| OVERPASS           | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| PARK BOUNDARY      | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| PAVED DITCH        | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| PULLOUT            | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| PULLOUT            | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| RAILROAD CROSSING  | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| RETAINING WALL     | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| RETAINING WALL     | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |
| SIGN               | 9                                 | 6                          | 8                           | 4                              | 2                              | 2                            | EACH        |
| STATE BOUNDARY     | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| TRAFFIC LIGHT      | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| TUNNEL             | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | EACH        |
| TUNNEL             | 0                                 | 0                          | 0                           | 0                              | 0                              | 0                            | LINEAR FEET |

Date Collected 04/05/2014

## KALA: ROUTE MAINTENANCE FEATURES SUMMARY

| FEATURE            | ROUTE 0016<br>BISHOP STREET | ROUTE 0017<br>MCKINLEY STREET | ROUTE 0018<br>BALDWIN STREET | ROUTE 0019<br>KAULANI STREET | ROUTE 0021<br>BAYVIEW LOOP | ROUTE 0022<br>HALEAKALA STREET | UNIT        |
|--------------------|-----------------------------|-------------------------------|------------------------------|------------------------------|----------------------------|--------------------------------|-------------|
| BRIDGE             | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| CATTLE GUARD       | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| CULVERT            | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| CURB               | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| DROP INLET         | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| GATE               | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| GUARD/GUIDE RAIL   | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| CABLE              | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| NON-CABLE          | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| GUARD/GUIDE WALL   | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| BOLLARD            | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| TEMPORARY BARRIER  | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| NON TEMP/BOLLARD   | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| INTERSECTION       | 4                           | 6                             | 6                            | 6                            | 4                          | 7                              | EACH        |
| LOW WATER CROSSING | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| LOW WATER CROSSING | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| MILE MARKER        | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| OVERPASS           | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| PARK BOUNDARY      | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| PAVED DITCH        | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| PULLOUT            | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| PULLOUT            | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| RAILROAD CROSSING  | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| RETAINING WALL     | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| RETAINING WALL     | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |
| SIGN               | 2                           | 2                             | 2                            | 2                            | 2                          | 4                              | EACH        |
| STATE BOUNDARY     | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| TRAFFIC LIGHT      | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| TUNNEL             | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | EACH        |
| TUNNEL             | 0                           | 0                             | 0                            | 0                            | 0                          | 0                              | LINEAR FEET |

## KALA: ROUTE MAINTENANCE FEATURES SUMMARY

| FEATURE            | ROUTE 0023<br>SCHOOL STREET | ROUTE 0024<br>KILOHANA STREET | ROUTE 0025ZZ<br>BISHOP ROAD | ROUTE 0026ZZ<br>CONRADY PLACE AND MISSION | ROUTE 0028<br>STAFF STREET(STAFF ROW) | ROUTE 0030<br>MCVEIGH STREET A | UNIT        |
|--------------------|-----------------------------|-------------------------------|-----------------------------|---|---------------------------------------|--------------------------------|-------------|
| BRIDGE             | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| CATTLE GUARD       | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| CULVERT            | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| CURB               | 0                           | 0                             | 2725                        | 0   | 682                                   | 570                            | LINEAR FEET |
| DROP INLET         | 0                           | 0                             | 1                           | 0   | 4                                     | 0                              | EACH        |
| GATE               | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| GUARD/GUIDE RAIL   | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| CABLE              | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| NON-CABLE          | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| GUARD/GUIDE WALL   | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| BOLLARD            | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| TEMPORARY BARRIER  | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| NON TEMP/BOLLARD   | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| INTERSECTION       | 11                          | 4                             | 13                          | 8   | 8                                     | 3                              | EACH        |
| LOW WATER CROSSING | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| LOW WATER CROSSING | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| MILE MARKER        | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| OVERPASS           | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| PARK BOUNDARY      | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| PAVED DITCH        | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| PULLOUT            | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| PULLOUT            | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| RAILROAD CROSSING  | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| RETAINING WALL     | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| RETAINING WALL     | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |
| SIGN               | 6                           | 2                             | 0                           | 1   | 2                                     | 0                              | EACH        |
| STATE BOUNDARY     | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| TRAFFIC LIGHT      | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| TUNNEL             | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | EACH        |
| TUNNEL             | 0                           | 0                             | 0                           | 0   | 0                                     | 0                              | LINEAR FEET |

Date Collected 04/05/2014



## KALA: ROUTE MAINTENANCE FEATURES SUMMARY

| FEATURE            | ROUTE 0031<br>MCVEIGH STREET B | ROUTE 0032<br>MCVEIGH STREET C | ROUTE 0033<br>MCVEIGH STREET D | ROUTE 0034<br>MCVEIGH STREET E | ROUTE 0035<br>MCVEIGH STREET F | ROUTE 0411<br>INDUSTRIAL ROAD | UNIT        |
|--------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|-------------|
| BRIDGE             | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| CATTLE GUARD       | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| CULVERT            | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| CURB               | 601                            | 438                            | 560                            | 264                            | 274                            | 0                             | LINEAR FEET |
| DROP INLET         | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| GATE               | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| GUARD/GUIDE RAIL   | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| CABLE              | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| NON-CABLE          | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| GUARD/GUIDE WALL   | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| BOLLARD            | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| TEMPORARY BARRIER  | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| NON TEMP/BOLLARD   | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| INTERSECTION       | 5                              | 4                              | 3                              | 4                              | 4                              | 5                             | EACH        |
| LOW WATER CROSSING | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| LOW WATER CROSSING | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| MILE MARKER        | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| OVERPASS           | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| PARK BOUNDARY      | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| PAVED DITCH        | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| PULLOUT            | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| PULLOUT            | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| RAILROAD CROSSING  | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| RETAINING WALL     | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| RETAINING WALL     | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |
| SIGN               | 1                              | 1                              | 0                              | 0                              | 0                              | 1                             | EACH        |
| STATE BOUNDARY     | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| TRAFFIC LIGHT      | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| TUNNEL             | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | EACH        |
| TUNNEL             | 0                              | 0                              | 0                              | 0                              | 0                              | 0                             | LINEAR FEET |

## KALA: STRUCTURE LIST

| <b>ROUTE<br/>NUMBER</b> | <b>FUNCTIONAL<br/>CLASS</b> | <b>MILEPOST<br/>START</b> | <b>MILEPOST<br/>END</b> | <b>FEATURE</b>  | <b>STRUCTURE<br/>NUMBER</b> |
|-------------------------|-----------------------------|---------------------------|-------------------------|-----------------|-----------------------------|
| 0011                    | 1                           | 0.433                     | 0.440                   | WAIHANAU BRIDGE | 8896-001                    |

\*Only structures along paved roads that are assigned structure numbers are shown in this list.

**Section 9**  
**Route Maintenance**  
**Features Road Logs**



**Kalaupapa National Historical Park**



**Federal Lands Highway**  
**Road Inventory Program**

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0010AZ: KAMEHAMEHA STREET A**

| <b>FROM MILEPOST</b> | <b>TO MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>  |
|----------------------|--------------------|----------------|-------------|---|
| 0.000                | 0.000              | ROUTE BEGIN    | N/A         | FROM ROUTE 0010BZ (KAMEHAMEHA STREET B) AND KALAUPAPA AIRPORT PARKING LOT (STATE DOT)                   |
| 0.000                | 0.000              | INTERSECTION   | L           | ROUTE 0010BZ (KAMEHAMEHA STREET B)  |
| 0.000                | 0.000              | INTERSECTION   | N/A         | PAVED PARKING (KALAUPAPA AIRPORT PARKING LOT (STATE DOT))   |
| 0.040                | 0.040              | INTERSECTION   | L           | PAVED PARKING (KALAUPAPA AIRPORT PARKING LOT (STATE DOT))   |
| 0.044                | 0.044              | SIGN           | L           | GUIDE, KALAUPAPA NATIONAL HISTORICAL PARK   |
| 0.048                | 0.048              | SIGN           | R           | WARNING, NO ENTRY BEYOND THIS POINT WITHOUT A VISITOR PERMIT VIOLATORS ARE SUBJECT TO ARREST HRS 326-39 |
| 0.060                | 0.060              | INTERSECTION   | L           | ROUTE 0405 (LIGHTHOUSE ROAD)  |
| 0.221                | 0.221              | INTERSECTION   | R           | ROUTE 0406 (BEACH HOUSE ROAD)   |
| 0.582                | 0.582              | INTERSECTION   | R           | ROUTE 0406 (BEACH HOUSE ROAD)   |
| 0.934                | 0.934              | CATTLE GUARD   | N/A         | N/A   |
| 1.109                | 1.109              | SIGN           | R           | GUIDE, LIONS INTERNATIONAL  |
| 1.109                | 1.109              | SIGN           | R           | GUIDE, WELCOME TO KALAUPAPA   |
| 1.110                | 1.110              | SIGN           | R           | REGULATORY, 15 MPH RECOMMENDED SPEED LIMIT  |
| 1.110                | 1.110              | SIGN           | R           | WARNING, CAUTION DRIVE SLOWLY   |
| 1.359                | 1.359              | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)   |
| 1.370                | 1.370              | SIGN           | L           | REGULATORY, STOP  |
| 1.476                | 1.476              | INTERSECTION   | L           | ROUTE 0024 (KILOHANA STREET)  |
| 1.494                | 1.494              | CULVERT        | N/A         | N/A   |
| 1.531                | 1.531              | SIGN           | R           | GUIDE, TSUNAMI EVACUATION ROUTE   |
| 1.531                | 1.531              | SIGN           | R           | REGULATORY, STOP  |
| 1.533                | 1.533              | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)   |
| 1.533                | 1.533              | INTERSECTION   | R           | PAVED PARKING (NON NPS)   |
| 1.533                | 1.533              | INTERSECTION   | N/A         | ROUTE 0012 (DAMIEN STREET)  |
| 1.533                | 1.533              | ROUTE END      | N/A         | TO BEGINNING OF ROUTE 0012 (DAMIEN STREET) AND BEGINNING OF ROUTE 0013 (BERETANIA STREET)               |

Date Collected: 04/05/2014



**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0010BZ: KAMEHAMEHA STREET B**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>  |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0010AZ (KAMEHAMEHA STREET A)   |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0010AZ (KAMEHAMEHA STREET A)  |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0010AZ (KAMEHAMEHA STREET A)  |
| 0.053                    | 0.053                  | INTERSECTION   | L           | ROUTE 0010AZ (KAMEHAMEHA STREET A)  |
| 0.053                    | 0.053                  | INTERSECTION   | R           | PAVED PARKING (KALAUPAPA AIRPORT PARKING LOT (STATE DOT))                           |
| 0.053                    | 0.053                  | ROUTE END      | N/A         | TO ROUTE 0010AZ (KAMEHAMEHA STREET A) AND KALAUPAPA AIRPORT PARKING LOT (STATE DOT) |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0011: PUAHI STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>   |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0010ZZ (KAMEHAMEHA STREET)  |
| 0.000                    | 0.000                  | INTERSECTION   | N/A         | ROUTE 0010AZ (KAMEHAMEHA STREET A)   |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0010AZ (KAMEHAMEHA STREET A)   |
| 0.062                    | 0.062                  | INTERSECTION   | L           | ROUTE 0411 (INDUSTRIAL ROAD)   |
| 0.093                    | 0.093                  | INTERSECTION   | R           | ROUTE 0024 (KILOHANA STREET)   |
| 0.110                    | 0.116                  | RETAINING WALL | L           | N/A  |
| 0.113                    | 0.113                  | CULVERT        | N/A         | N/A  |
| 0.130                    | 0.130                  | SIGN           | R           | GUIDE, TSUNAMI EVACUATION ROUTE  |
| 0.130                    | 0.130                  | SIGN           | R           | REGULATORY, STOP   |
| 0.142                    | 0.142                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)  |
| 0.142                    | 0.142                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)  |
| 0.150                    | 0.150                  | SIGN           | L           | REGULATORY, STOP   |
| 0.150                    | 0.150                  | SIGN           | L           | GUIDE, TSUNAMI EVACUATION ROUTE  |
| 0.173                    | 0.173                  | INTERSECTION   | R           | ROUTE 0026AZ (MISSION / PUAHI CONNECTOR)   |
| 0.232                    | 0.232                  | INTERSECTION   | R           | ROUTE 0023 (SCHOOL STREET)   |
| 0.232                    | 0.232                  | INTERSECTION   | L           | ROUTE 0023 (SCHOOL STREET)   |
| 0.235                    | 0.235                  | INTERSECTION   | L           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))  |
| 0.325                    | 0.325                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)   |
| 0.325                    | 0.325                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)   |
| 0.385                    | 0.385                  | INTERSECTION   | R           | ROUTE 0021 (BAYVIEW LOOP)  |
| 0.408                    | 0.408                  | SIGN           | R           | REGULATORY, ACCESS BRIDGE  |
| 0.408                    | 0.408                  | SIGN           | R           | REGULATORY, SPEED LIMIT 10 MPH   |
| 0.433                    | 0.440                  | BRIDGE         | N/A         | 8896-001 (WAIHANAU BRIDGE)   |
| 0.440                    | 0.440                  | INTERSECTION   | N/A         | ROUTE 0402 (TRAIL ACCESS ROAD)   |
| 0.440                    | 0.440                  | ROUTE END      | N/A         | TO END OF WAIHANAU BRIDGE (8896-001) / BEGINNING OF ROUTE 0402 (TRAIL ACCESS ROAD) |

Date Collected: 04/05/2014

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0012: DAMIEN STREET**

| <b>FROM MILEPOST</b> | <b>TO MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                                  |
|----------------------|--------------------|----------------|-------------|---|
| 0.000                | 0.000              | ROUTE BEGIN    | N/A         | FROM END OF ROUTE 0010ZZ (KAMEHAMEHA STREET)    |
| 0.000                | 0.000              | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)                   |
| 0.000                | 0.000              | INTERSECTION   | N/A         | ROUTE 0010AZ (KAMEHAMEHA STREET A)              |
| 0.000                | 0.000              | SIGN           | L           | REGULATORY, STOP                                |
| 0.000                | 0.000              | SIGN           | L           | GUIDE, TSUNAMI EVACUATION ROUTE                 |
| 0.010                | 0.010              | SIGN           | L           | REGULATORY, RESERVED PARKING                    |
| 0.010                | 0.010              | SIGN           | L           | REGULATORY, 15 MINUTE PARKING                   |
| 0.020                | 0.020              | INTERSECTION   | L           | ROUTE 0026BZ (CONRADY PLACE)                    |
| 0.077                | 0.077              | INTERSECTION   | L           | ROUTE 0023 (SCHOOL STREET)                      |
| 0.150                | 0.150              | INTERSECTION   | L           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))       |
| 0.152                | 0.152              | INTERSECTION   | R           | ROUTE 0021 (BAYVIEW LOOP)                       |
| 0.175                | 0.175              | INTERSECTION   | L           | ROUTE 0014BZ (MISSION STREET (SOUTH SPUR ROAD)) |
| 0.196                | 0.196              | SIGN           | R           | REGULATORY, STOP                                |
| 0.196                | 0.196              | SIGN           | R           | GUIDE, TSUNAMI EVACUATION ROUTE                 |
| 0.200                | 0.200              | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)                       |
| 0.200                | 0.200              | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)                       |
| 0.205                | 0.205              | SIGN           | L           | GUIDE, TSUNAMI EVACUATION ROUTE                 |
| 0.205                | 0.205              | SIGN           | L           | REGULATORY, STOP                                |
| 0.376                | 0.376              | INTERSECTION   | L           | ROUTE 0017 (MCKINLEY STREET)                    |
| 0.380                | 0.381              | CURB           | L           | CONCRETE CURB                                   |
| 0.418                | 0.418              | INTERSECTION   | L           | ROUTE 0018 (BALDWIN STREET)                     |
| 0.450                | 0.450              | INTERSECTION   | L           | ROUTE 0019 (KAIULANI STREET)                    |
| 0.465                | 0.465              | ROUTE END      | N/A         | TO BEGINNING OF ROUTE 0020 (KAPIOLANI STREET)   |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0013: BERETANIA STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>  |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM INTERSECTION OF ROUTE 0012 (DAMIEN STREET) AND ROUTE 0010ZZ (KAMEHAMEHA STREET)  |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0010AZ (KAMEHAMEHA STREET A)  |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)  |
| 0.050                    | 0.050                  | INTERSECTION   | R           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))   |
| 0.076                    | 0.076                  | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)   |
| 0.076                    | 0.076                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)   |
| 0.120                    | 0.120                  | INTERSECTION   | L           | ROUTE 0411 (INDUSTRIAL ROAD)  |
| 0.130                    | 0.130                  | INTERSECTION   | L           | ROUTE 0900 (PASCHOAL HALL PARKING)  |
| 0.155                    | 0.155                  | SIGN           | R           | GUIDE, TSUNAMI EVACUATION ROUTE   |
| 0.157                    | 0.157                  | INTERSECTION   | R           | ROUTE 0015 (GOODHUE STREET)   |
| 0.208                    | 0.208                  | INTERSECTION   | R           | ROUTE 0016 (BISHOP STREET)  |
| 0.221                    | 0.221                  | INTERSECTION   | L           | ROUTE 0028 (STAFF STREET (STAFF ROW))   |
| 0.242                    | 0.242                  | SIGN           | R           | GUIDE, TSUNAMI EVACUATION ROUTE   |
| 0.245                    | 0.245                  | INTERSECTION   | R           | ROUTE 0017 (MCKINLEY STREET)  |
| 0.292                    | 0.292                  | INTERSECTION   | R           | ROUTE 0018 (BALDWIN STREET)   |
| 0.292                    | 0.292                  | INTERSECTION   | L           | ROUTE 0407 (STAFF LOOP)   |
| 0.320                    | 0.320                  | SIGN           | R           | GUIDE, TSUNAMI EVACUATION ROUTE   |
| 0.321                    | 0.321                  | INTERSECTION   | R           | ROUTE 0019 (KAIULANI STREET)  |
| 0.333                    | 0.333                  | INTERSECTION   | N/A         | ROUTE 0013 (BERTANIA STREET) UNPAVED SECTION  |
| 0.333                    | 0.333                  | SIGN           | N/A         | GRAPHIC SIGN, NO TEXT   |
| 0.333                    | 0.333                  | ROUTE END      | N/A         | TO ROUTE 0020 (KAPIOLANI STREET) AND BEGINNING OF ROUTE 0400 (DAMIEN ROAD) AT MP 0.40 |



**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0014AZ: MISSION STREET (MAIN ROAD)**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                                  |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET)              |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)                   |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)                   |
| 0.000                    | 0.000                  | SIGN           | R           | REGULATORY, STOP                                |
| 0.019                    | 0.019                  | INTERSECTION   | R           | ROUTE 0026BZ (CONRADY PLACE)                    |
| 0.027                    | 0.027                  | INTERSECTION   | L           | ROUTE 0026AZ (MISSION / PUAHI CONNECTOR)        |
| 0.080                    | 0.080                  | INTERSECTION   | R           | ROUTE 0023 (SCHOOL STREET)                      |
| 0.080                    | 0.080                  | INTERSECTION   | L           | ROUTE 0023 (SCHOOL STREET)                      |
| 0.133                    | 0.133                  | INTERSECTION   | L           | ROUTE 0014BZ (MISSION STREET (SOUTH SPUR ROAD)) |
| 0.139                    | 0.139                  | SIGN           | R           | REGULATORY, STOP                                |
| 0.141                    | 0.141                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)                      |
| 0.141                    | 0.141                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)                      |
| 0.141                    | 0.141                  | ROUTE END      | N/A         | TO ROUTE 0012 (DAMIEN STREET)                   |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0014BZ: MISSION STREET (SOUTH SPUR ROAD)**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                               |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0012 (DAMIEN STREET)              |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)                   |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)                   |
| 0.025                    | 0.025                  | INTERSECTION   | R           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))    |
| 0.025                    | 0.025                  | INTERSECTION   | L           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))    |
| 0.025                    | 0.025                  | ROUTE END      | N/A         | TO ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0015: GOODHUE STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|--------------------------|------------------------|----------------|-------------|------------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)      |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)      |
| 0.002                    | 0.002                  | SIGN           | L           | REGULATORY, STOP                   |
| 0.089                    | 0.089                  | SIGN           | R           | REGULATORY, STOP                   |
| 0.091                    | 0.091                  | INTERSECTION   | R           | ROUTE 0023 (SCHOOL STREET)         |
| 0.091                    | 0.091                  | INTERSECTION   | L           | ROUTE 0023 (SCHOOL STREET)         |
| 0.091                    | 0.091                  | ROUTE END      | N/A         | TO ROUTE 0023 (SCHOOL STREET)      |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0016: BISHOP STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|--------------------------|------------------------|----------------|-------------|------------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)      |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)      |
| 0.002                    | 0.002                  | SIGN           | L           | REGULATORY, STOP                   |
| 0.074                    | 0.074                  | SIGN           | R           | REGULATORY, STOP                   |
| 0.076                    | 0.076                  | INTERSECTION   | L           | ROUTE 0023 (SCHOOL STREET)         |
| 0.076                    | 0.076                  | INTERSECTION   | R           | ROUTE 0023 (SCHOOL STREET)         |
| 0.076                    | 0.076                  | ROUTE END      | N/A         | TO ROUTE 0023 (SCHOOL STREET)      |



**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0017: MCKINLEY STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|--------------------------|------------------------|----------------|-------------|------------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)      |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)      |
| 0.002                    | 0.002                  | SIGN           | L           | REGULATORY, STOP                   |
| 0.072                    | 0.072                  | INTERSECTION   | R           | ROUTE 0023 (SCHOOL STREET)         |
| 0.138                    | 0.138                  | INTERSECTION   | L           | ROUTE 0022 (HALEAKALA STREET)      |
| 0.250                    | 0.256                  | CURB           | L           | CONCRETE CURB                      |
| 0.254                    | 0.254                  | SIGN           | L           | REGULATORY, STOP                   |
| 0.257                    | 0.257                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)         |
| 0.257                    | 0.257                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)         |
| 0.257                    | 0.257                  | ROUTE END      | N/A         | TO ROUTE 0012 (DAMIEN STREET)      |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0018: BALDWIN STREET**

| <b>FROM MILEPOST</b> | <b>TO MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|----------------------|--------------------|----------------|-------------|------------------------------------|
| 0.000                | 0.000              | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET) |
| 0.000                | 0.000              | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)      |
| 0.000                | 0.000              | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)      |
| 0.002                | 0.002              | SIGN           | L           | REGULATORY, STOP                   |
| 0.136                | 0.136              | INTERSECTION   | R           | ROUTE 0022 (HALEAKALA STREET)      |
| 0.138                | 0.138              | INTERSECTION   | L           | ROUTE 0022 (HALEAKALA STREET)      |
| 0.262                | 0.262              | SIGN           | R           | REGULATORY, STOP                   |
| 0.266                | 0.266              | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)         |
| 0.266                | 0.266              | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)         |
| 0.266                | 0.266              | ROUTE END      | N/A         | TO ROUTE 0012 (DAMIEN STREET)      |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0019: KAIULANI STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                                |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET)            |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)                 |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)                 |
| 0.001                    | 0.001                  | SIGN           | L           | REGULATORY, STOP                              |
| 0.129                    | 0.129                  | INTERSECTION   | R           | ROUTE 0022 (HALEAKALA STREET)                 |
| 0.129                    | 0.129                  | INTERSECTION   | L           | ROUTE 0022 (HALEAKALA STREET) UNPAVED SECTION |
| 0.274                    | 0.274                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)                    |
| 0.274                    | 0.274                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)                    |
| 0.274                    | 0.274                  | SIGN           | R           | REGULATORY, STOP                              |
| 0.274                    | 0.274                  | ROUTE END      | N/A         | TO ROUTE 0012 (DAMIEN STREET)                 |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0021: BAYVIEW LOOP**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                  |
|--------------------------|------------------------|----------------|-------------|---------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0012 (DAMIEN STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)      |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)      |
| 0.001                    | 0.001                  | SIGN           | L           | REGULATORY, STOP                |
| 0.155                    | 0.155                  | SIGN           | R           | REGULATORY, STOP                |
| 0.158                    | 0.158                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)       |
| 0.158                    | 0.158                  | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)       |
| 0.158                    | 0.158                  | ROUTE END      | N/A         | TO ROUTE 0011 (PUAHI STREET)    |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0022: HALEAKALA STREET**

| <b>FROM MILEPOST</b> | <b>TO MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                                |
|----------------------|--------------------|----------------|-------------|---|
| 0.000                | 0.000              | ROUTE BEGIN    | N/A         | FROM ROUTE 0017 (MCKINLEY STREET)             |
| 0.000                | 0.000              | INTERSECTION   | R           | ROUTE 0017 (MCKINLEY STREET)                  |
| 0.000                | 0.000              | INTERSECTION   | L           | ROUTE 0017 (MCKINLEY STREET)                  |
| 0.001                | 0.001              | SIGN           | L           | REGULATORY, STOP                              |
| 0.035                | 0.035              | SIGN           | R           | REGULATORY, STOP                              |
| 0.037                | 0.037              | INTERSECTION   | L           | ROUTE 0018 (BALDWIN STREET)                   |
| 0.037                | 0.037              | INTERSECTION   | R           | ROUTE 0018 (BALDWIN STREET)                   |
| 0.042                | 0.042              | SIGN           | L           | REGULATORY, STOP                              |
| 0.067                | 0.067              | SIGN           | R           | REGULATORY, STOP                              |
| 0.070                | 0.070              | INTERSECTION   | L           | ROUTE 0019 (KAIULANI STREET)                  |
| 0.070                | 0.070              | INTERSECTION   | R           | ROUTE 0019 (KAIULANI STREET)                  |
| 0.070                | 0.070              | INTERSECTION   | N/A         | ROUTE 0022 (HALEAKALA STREET) UNPAVED SECTION |
| 0.070                | 0.070              | ROUTE END      | N/A         | TO ROUTE 0020 (KAPIOLANI STREET) AT MP 0.13   |



**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0023: SCHOOL STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                            |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0012 (DAMIEN STREET)           |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)                |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)                |
| 0.001                    | 0.001                  | SIGN           | L           | REGULATORY, STOP                          |
| 0.048                    | 0.048                  | SIGN           | R           | REGULATORY, STOP                          |
| 0.050                    | 0.050                  | INTERSECTION   | L           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |
| 0.050                    | 0.050                  | INTERSECTION   | R           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |
| 0.053                    | 0.053                  | SIGN           | L           | REGULATORY, STOP                          |
| 0.082                    | 0.082                  | SIGN           | R           | REGULATORY, STOP                          |
| 0.087                    | 0.087                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)                 |
| 0.087                    | 0.087                  | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)                 |
| 0.088                    | 0.088                  | INTERSECTION   | R           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))   |
| 0.099                    | 0.099                  | SIGN           | L           | REGULATORY, STOP                          |
| 0.129                    | 0.129                  | INTERSECTION   | L           | ROUTE 0015 (GOODUE STREET)                |
| 0.181                    | 0.181                  | INTERSECTION   | L           | ROUTE 0016 (BISHOP STREET)                |
| 0.227                    | 0.227                  | SIGN           | R           | REGULATORY, STOP                          |
| 0.228                    | 0.228                  | INTERSECTION   | L           | ROUTE 0017 (MCKINLEY STREET)              |
| 0.228                    | 0.228                  | INTERSECTION   | R           | ROUTE 0017 (MCKINLEY STREET)              |
| 0.228                    | 0.228                  | ROUTE END      | N/A         | TO ROUTE 0017 (MCKINLEY STREET)           |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0024: KILOHANA STREET**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                        |
|--------------------------|------------------------|----------------|-------------|---------------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0010ZZ (KAMEHAMEHA STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0010AZ (KAMEHAMEHA STREET A)    |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0010AZ (KAMEHAMEHA STREET A)    |
| 0.001                    | 0.001                  | SIGN           | R           | REGULATORY, STOP                      |
| 0.056                    | 0.056                  | SIGN           | R           | REGULATORY, STOP                      |
| 0.057                    | 0.057                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)             |
| 0.057                    | 0.057                  | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)             |
| 0.057                    | 0.057                  | ROUTE END      | N/A         | TO ROUTE 0011 (PUAHI STREET)          |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0025AZ: BISHOP ROAD (FRONT LOOP)**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>  |
|--------------------------|------------------------|----------------|-------------|---|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM INTERSECTION OF ROUTE 0011 (PUAHI STREET) AND ROUTE 0023 (SCHOOL STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0023 (SCHOOL STREET)  |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0023 (SCHOOL STREET)  |
| 0.000                    | 0.000                  | INTERSECTION   | N/A         | ROUTE 0011 (PUAHI STREET)   |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)   |
| 0.000                    | 0.090                  | CURB           | R           | MASONRY / STONE CURB  |
| 0.000                    | 0.066                  | CURB           | L           | MASONRY / STONE CURB  |
| 0.068                    | 0.068                  | INTERSECTION   | L           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))                                       |
| 0.070                    | 0.144                  | CURB           | L           | MASONRY / STONE CURB  |
| 0.092                    | 0.092                  | INTERSECTION   | R           | ROUTE 0025BZ (BISHOP ROAD (BACK LOOP))  |
| 0.094                    | 0.118                  | CURB           | R           | MASONRY / STONE CURB  |
| 0.120                    | 0.120                  | INTERSECTION   | R           | ROUTE 0025BZ (BISHOP ROAD (BACK LOOP))  |
| 0.122                    | 0.144                  | CURB           | R           | MASONRY / STONE CURB  |
| 0.145                    | 0.145                  | INTERSECTION   | R           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))                                       |
| 0.145                    | 0.145                  | INTERSECTION   | N/A         | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))                                       |
| 0.145                    | 0.145                  | ROUTE END      | N/A         | TO END OF LOOP  |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0025BZ: BISHOP ROAD (BACK LOOP)**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                               |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP)) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))      |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))      |
| 0.000                    | 0.120                  | CURB           | R           | MASONRY / STONE CURB                         |
| 0.000                    | 0.120                  | CURB           | L           | MASONRY / STONE CURB                         |
| 0.007                    | 0.007                  | DROP INLET     | R           | N/A  |
| 0.120                    | 0.120                  | INTERSECTION   | L           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))      |
| 0.120                    | 0.120                  | INTERSECTION   | R           | ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))      |
| 0.120                    | 0.120                  | ROUTE END      | N/A         | TO ROUTE 0025AZ (BISHOP ROAD (FRONT LOOP))   |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0026AZ: MISSION / PUAHI CONNECTOR**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                               |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0011 (PUAHI STREET)               |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)                    |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)                    |
| 0.026                    | 0.026                  | INTERSECTION   | L           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))    |
| 0.026                    | 0.026                  | INTERSECTION   | R           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))    |
| 0.026                    | 0.026                  | ROUTE END      | N/A         | TO ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |



**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0026BZ: CONRADY PLACE**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                                 |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0014AZ (MISSION STREET (MAIN ROAD)) |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))      |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0014AZ (MISSION STREET (MAIN ROAD))      |
| 0.050                    | 0.050                  | SIGN           | L           | REGULATORY, STOP                               |
| 0.052                    | 0.052                  | INTERSECTION   | L           | ROUTE 0012 (DAMIEN STREET)                     |
| 0.052                    | 0.052                  | INTERSECTION   | R           | ROUTE 0012 (DAMIEN STREET)                     |
| 0.052                    | 0.052                  | ROUTE END      | N/A         | TO ROUTE 0012 (DAMIEN STREET)                  |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0028: STAFF STREET (STAFF ROW)**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|--------------------------|------------------------|----------------|-------------|------------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0013 (BERETANIA STREET) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)      |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)      |
| 0.001                    | 0.001                  | SIGN           | L           | GUIDE, TSUNAMI EVACUATION ROUTE    |
| 0.001                    | 0.001                  | SIGN           | L           | REGULATORY, STOP                   |
| 0.122                    | 0.122                  | INTERSECTION   | R           | ROUTE 0407 (STAFF LOOP)            |
| 0.183                    | 0.183                  | INTERSECTION   | R           | ROUTE 0030 (MCVEIGH STREET A)      |
| 0.185                    | 0.202                  | CURB           | R           | CONCRETE CURB                      |
| 0.185                    | 0.255                  | CURB           | L           | CONCRETE CURB                      |
| 0.185                    | 0.185                  | DROP INLET     | R           | N/A                                |
| 0.203                    | 0.203                  | INTERSECTION   | R           | ROUTE 0031 (MCVEIGH STREET B)      |
| 0.205                    | 0.230                  | CURB           | R           | CONCRETE CURB                      |
| 0.205                    | 0.205                  | DROP INLET     | R           | N/A                                |
| 0.232                    | 0.232                  | INTERSECTION   | R           | ROUTE 0032 (MCVEIGH STREET C)      |
| 0.234                    | 0.234                  | DROP INLET     | R           | N/A                                |
| 0.234                    | 0.249                  | CURB           | R           | CONCRETE CURB                      |
| 0.251                    | 0.251                  | INTERSECTION   | R           | ROUTE 0033 (MCVEIGH STREET D)      |
| 0.253                    | 0.255                  | CURB           | R           | CONCRETE CURB                      |
| 0.253                    | 0.253                  | DROP INLET     | R           | N/A                                |
| 0.255                    | 0.255                  | INTERSECTION   | N/A         | DEAD END                           |
| 0.255                    | 0.255                  | ROUTE END      | N/A         | TO END OF PAVEMENT                 |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0030: MCVEIGH STREET A**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                             |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0028 (STAFF STREET (STAFF ROW)) |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.054                  | CURB           | L           | CONCRETE CURB                              |
| 0.000                    | 0.054                  | CURB           | R           | CONCRETE CURB                              |
| 0.002                    | 0.002                  | SIGN           | R           | REGULATORY, STOP                           |
| 0.054                    | 0.054                  | INTERSECTION   | N/A         | DEAD END                                   |
| 0.054                    | 0.054                  | ROUTE END      | N/A         | TO END OF PAVEMENT                         |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0031: MCVEIGH STREET B**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                             |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0028 (STAFF STREET (STAFF ROW)) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.015                  | CURB           | L           | CONCRETE CURB                              |
| 0.000                    | 0.058                  | CURB           | R           | CONCRETE CURB                              |
| 0.002                    | 0.002                  | SIGN           | R           | REGULATORY, STOP                           |
| 0.016                    | 0.016                  | INTERSECTION   | L           | ROUTE 0034 (MCVEIGH STREET E)              |
| 0.017                    | 0.058                  | CURB           | L           | CONCRETE CURB                              |
| 0.044                    | 0.044                  | INTERSECTION   | L           | ROUTE 0035 (MCVEIGH STREET F)              |
| 0.058                    | 0.058                  | INTERSECTION   | N/A         | DEAD END                                   |
| 0.058                    | 0.058                  | ROUTE END      | N/A         | TO END OF PAVEMENT                         |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0032: MCVEIGH STREET C**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                             |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0028 (STAFF STREET (STAFF ROW)) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.015                  | CURB           | R           | CONCRETE CURB                              |
| 0.000                    | 0.044                  | CURB           | L           | CONCRETE CURB                              |
| 0.002                    | 0.002                  | SIGN           | L           | REGULATORY, STOP                           |
| 0.017                    | 0.017                  | INTERSECTION   | R           | ROUTE 0034 (MCVEIGH STREET E)              |
| 0.019                    | 0.043                  | CURB           | R           | CONCRETE CURB                              |
| 0.044                    | 0.044                  | INTERSECTION   | R           | ROUTE 0035 (MCVEIGH STREET F)              |
| 0.044                    | 0.044                  | ROUTE END      | N/A         | TO ROUTE 0035 (MCVEIGH STREET F)           |



**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0033: MCVEIGH STREET D**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                             |
|--------------------------|------------------------|----------------|-------------|--|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0028 (STAFF STREET (STAFF ROW)) |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.000                    | 0.053                  | CURB           | L           | CONCRETE CURB                              |
| 0.000                    | 0.053                  | CURB           | R           | CONCRETE CURB                              |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0028 (STAFF STREET (STAFF ROW))      |
| 0.054                    | 0.054                  | INTERSECTION   | N/A         | DEAD END                                   |
| 0.054                    | 0.054                  | ROUTE END      | N/A         | TO END OF PAVEMENT                         |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0034: MCVEIGH STREET E**

| <b>FROM MILEPOST</b> | <b>TO MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|----------------------|--------------------|----------------|-------------|------------------------------------|
| 0.000                | 0.000              | ROUTE BEGIN    | N/A         | FROM ROUTE 0031 (MCVEIGH STREET B) |
| 0.000                | 0.000              | INTERSECTION   | L           | ROUTE 0031 (MCVEIGH STREET B)      |
| 0.000                | 0.000              | INTERSECTION   | R           | ROUTE 0031 (MCVEIGH STREET B)      |
| 0.000                | 0.025              | CURB           | R           | CONCRETE CURB                      |
| 0.000                | 0.025              | CURB           | L           | CONCRETE CURB                      |
| 0.025                | 0.025              | INTERSECTION   | R           | ROUTE 0032 (MCVEIGH STREET C)      |
| 0.025                | 0.025              | INTERSECTION   | L           | ROUTE 0032 (MCVEIGH STREET C)      |
| 0.025                | 0.025              | ROUTE END      | N/A         | TO ROUTE 0032 (MCVEIGH STREET C)   |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0035: MCVEIGH STREET F**

| <b>FROM MILEPOST</b> | <b>TO MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|----------------------|--------------------|----------------|-------------|------------------------------------|
| 0.000                | 0.000              | ROUTE BEGIN    | N/A         | FROM ROUTE 0031 (MCVEIGH STREET B) |
| 0.000                | 0.000              | INTERSECTION   | L           | ROUTE 0031 (MCVEIGH STREET B)      |
| 0.000                | 0.000              | INTERSECTION   | R           | ROUTE 0031 (MCVEIGH STREET B)      |
| 0.000                | 0.026              | CURB           | L           | CONCRETE CURB                      |
| 0.000                | 0.026              | CURB           | R           | CONCRETE CURB                      |
| 0.026                | 0.026              | INTERSECTION   | L           | ROUTE 0032 (MCVEIGH STREET C)      |
| 0.026                | 0.026              | INTERSECTION   | R           | ROUTE 0032 (MCVEIGH STREET C)      |
| 0.026                | 0.026              | ROUTE END      | N/A         | TO ROUTE 0032 (MCVEIGH STREET C)   |

**KALA: ROUTE MAINTENANCE FEATURES ROAD LOG**  
**ROUTE 0411: INDUSTRIAL ROAD**

| <b>FROM<br/>MILEPOST</b> | <b>TO<br/>MILEPOST</b> | <b>FEATURE</b> | <b>SIDE</b> | <b>COMMENT</b>                     |
|--------------------------|------------------------|----------------|-------------|------------------------------------|
| 0.000                    | 0.000                  | ROUTE BEGIN    | N/A         | FROM ROUTE 0011 (PUAHI STREET)     |
| 0.000                    | 0.000                  | INTERSECTION   | R           | ROUTE 0011 (PUAHI STREET)          |
| 0.000                    | 0.000                  | INTERSECTION   | L           | ROUTE 0011 (PUAHI STREET)          |
| 0.105                    | 0.105                  | SIGN           | R           | REGULATORY, STOP                   |
| 0.109                    | 0.109                  | INTERSECTION   | L           | ROUTE 0900 (PASCHOAL HALL PARKING) |
| 0.115                    | 0.115                  | INTERSECTION   | L           | ROUTE 0013 (BERETANIA STREET)      |
| 0.115                    | 0.115                  | INTERSECTION   | R           | ROUTE 0013 (BERETANIA STREET)      |
| 0.115                    | 0.115                  | ROUTE END      | N/A         | TO ROUTE 0013 (BERETANIA STREET)   |

# Section 10 Appendix



## Kalaupapa National Historical Park



Federal Lands Highway  
Road Inventory Program



## Explanation of the Condition Descriptions

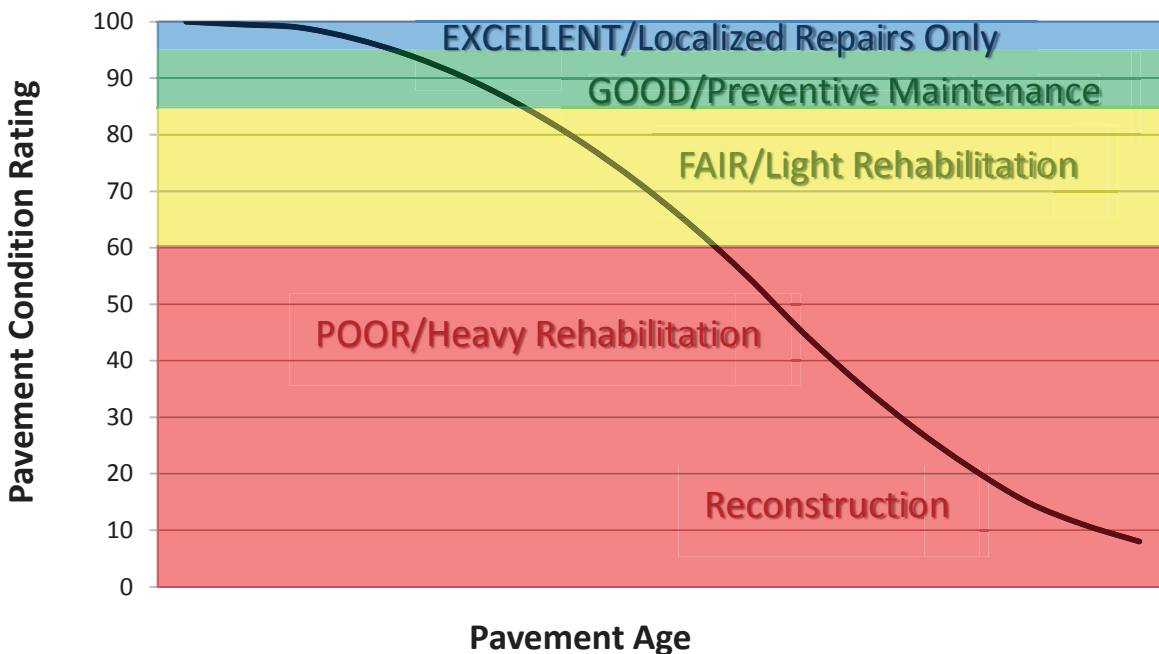
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The Pavement Condition Rating (PCR) can be used to indicate the place in the Pavement Life Cycle and the types of treatments that should be considered now and into the future.

- Excellent/New: PCR of 95-100. Pavements in this range will require only spot repairs
- Good: PCR of 85-94. Pavements in this range will likely be candidates for Preventive Maintenance. Examples include Chip and Slurry Seals, Micro Surfacing and Thin Overlays.
- Fair: PCR of 61-84. Pavements in this range will likely be candidates of Light Rehabilitation (L3R). Examples include single-lift overlays up to 2.5 inches in total thickness, milling and overlays.
- Poor: PCR of 60 or below. Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

At this time, specific Maintenance and Rehabilitation activities should be evaluated and recommended at the project level. Site-specific conditions that influence treatment type should be determined based on performing a subsurface investigation and/or pavement condition survey, and not be based solely on RIP data. Additionally, RIP produces a snapshot of conditions the year in which the data was collected. For further information or to obtain additional Pavement Management System's data from our Highway Pavement Management Application (HPMA) please contact the Eastern Federal Lands pavement team.

### Condition Categories and Treatments



## **Description of Manual Rating Methods**

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In 2013, the Federal Highway Administration updated existing Manual Rating Procedures in an effort to better align pavement conditions for Manually Rated Routes and Parking with the Highway Pavement Management Application (HPMA). HPMA is the Pavement Management System used by the FHWA to store inventory and condition data from the Road Inventory Program (RIP) and forecast future performance using prediction models. HPMA uses pavement condition data (collected by the Road Inventory Program) to develop life cycles for pavements and recommend treatments to maximize useable pavement life while minimizing costs associated with maintenance and repair.

The Federal Highway Administration (FHWA) developed a set of manual rating methods for pavement that are appropriate for Federal Roadways. Two different methods were developed for linear roads and a separate method was developed for parking areas and nonlinear roads. These methods employ a 0-100 rating scale and improve consistency and objectivity in the manual evaluation of surface distresses. They are compatible with ratings that are collected by the automated Data Collection Vehicle (DCV).

- The first of the two manual evaluation methods for roads uses rating criteria to assign index values to each distress type based on a visual evaluation of severity and extent.
- The second manual evaluation method for roads is very time demanding and is best employed on only a select set of routes which may have the highest visitor use and require a more intensive assessment. This method will be used for the Manual Rating of Function Class 1, 2, 7, and 8 Roads. This method is based on measurements that are recorded for each instance of a surface distress. These measurements are converted into index values using conversion formulas.
- Parking areas and non-linear roads are rated similar to the first method shown above, however, there are some slight differences due to the non-linear nature.

The details and criteria used for each of these rating methods are outlined below.

## **Visual Inspection Method for Manually Rating Secondary Roads**

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The visual inspection method for manually rated roads uses condition rating criteria that have been developed by FHWA. This criteria is based on a visual evaluation of the severity and extent of distresses to determine the overall condition of the roadway. This method is used for secondary roads that are Functional Class 3, 4, 5, and 6. This constitutes the majority of manually rated roads collected by the Road Inventory Program.

### **Rating Section Lengths**

For this method, Manually Rated Roads are rated in sections. These sections may be made based on length of changes in surface type or condition as described below. The ratings are then aggregated to give an overall rating for the Route:

- Rating sections should be no longer than .25 miles in order to keep the area being rated manageable.
- A new rating section may be started based on changes in condition, width, or surface type if these changes represent a significant portion of the route (are not isolated instances).
- If the road condition, width, and surface type remain constant then new sections do not need to be created unless the road exceeds .25 miles.

### **Rating Criteria**

For this method, Manually Rated Roads are evaluated using a visual inspection of the six distress types listed below. Each distress is assigned one of five index values. An overall Surface Condition Rating (SCR) and Pavement Condition Rating (PCR) are calculated based on these index values.

- Alligator Cracking
  - Rating based on percentage of road surface affected
- Longitudinal Cracking
  - Rating based on severity level (crack width) and percentage of road section length of longitudinal cracks
- Transverse Cracking
  - Rating based on crack width, crack spacing, and percentage of surface affected
- Patching
  - Rating based on percentage of road surface affected
- Rutting
  - Rating based on percentage of road surface affected
- Roughness
  - Only included if the overall roadway length is greater than 0.5 miles and the posted speed limit is greater than or equal to 25 mph. Subjective rating based on the overall ride comfort of the section.

Concrete Routes also receive a PCR rating based on visual evaluation of the following six distress types.

- Slab Faulting at Joints
- Slab Cracking and breakup
- Surface Delamination and Pop-outs
- Joint Distresses
- Patching

## **Distress Measurement Method for Manually Rating Primary Roads**

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A more intensive and time demanding assessment than our standard method was developed for Primary roads that are functional class 1, 2, 7, or 8. These high visitation roads are usually accessible by the automated Data Collection Vehicle but in rare instances may need to be manually rated. The method developed is based on measuring each instance of a distress. These measurements are totaled over each section length being measured and are then converted into index values between 0 and 100 (100 being a road with no distress) using index formula equations outlined below. The goal of this method is to produce measured index values which are directly comparable to the automated Data Collection Vehicle.

### **Rating Section Lengths**

For the distress measurement method roads are broken into sections in order to rate. Distress measurements are totaled for each section separately in order to determine the index value for that particular section. The section length to be rated is determined based on the following rules:

- Rating sections are between 0.25 and 0.50 miles long
- A new rating section is created if there is a significant change in condition or pavement width
- If there are no significant changes in condition or pavement width, rating sections are broken at equal intervals, typically 0.50 miles

### **Manual Distress Measurements**

#### **Alligator Cracking**

- Alligator cracking is measured by area (square feet). Instances of Alligator cracking are measured along the length and multiplied by the average width of the distressed area.
- The index for alligator cracking takes the total area of cracking compared to the interval length and converts it to a percentage. That percentage is then input into an index formula that yields a value between 0 and 100 (0 being the most distressed).
- Severity levels are not defined for manually measured Alligator cracks. The Alligator Crack Index formula is calculated based on an assumption of medium severity.

#### **Longitudinal Cracking**

- Longitudinal cracking (cracking in the direction parallel to the roadway) is measured by length (ft.).
- The index for longitudinal cracking takes the total length of cracking compared to the interval length and converts it to a percentage broken down by severity. That percentage is then input into a formula that yields a value between 0 and 100 (0 being the most distressed).
- Two severity levels are defined for manually measured Longitudinal Cracks. Lower severity cracks are those with a mean width of less than 0.25 inches. Sealed cracks with sealant in good condition are also considered lower severity. Higher severity cracks are those with a mean width of greater than 0.25 inches.

#### **Transverse Cracking**

- Transverse cracking (cracking in the direction perpendicular to the roadway) is measured by length (ft).
- The index for transverse cracking takes the total number of cracks (1 crack would encompass the full lane) broken down by severity. The total numbers of each severity are then put into a formula that yields a value between 0 and 100 (0 being the most distressed).

- Two severity levels are defined for manually measured Transverse Cracks. Lower severity cracks are those with a mean width of  $\leq 0.25$  inches. Sealed cracks with sealant in good condition are also considered lower severity. Higher severity cracks are those with a mean width of  $> 0.25$  inches.

#### **Patching and Potholes**

- Patching and Potholes are measured by area (square feet). Instances of Patching are measured along the length and multiplied by the average width of the patch.
- Instances of full lane width patching cannot be longer than 0.100 miles, otherwise it should be considered a pavement change rather than a distress.
- There are no stratified severities for Patching. It is either present or it is not.

#### **Rutting**

- Visible rutting is measured by length (feet) in each wheelpath. Rutting needs only to be visible for it to be rated.
- Severity levels are not defined for manually measured rutting.

#### **Roughness**

- Roughness is given a subjective rating of Excellent, Good, Fair, or Poor based on the overall riding comfort of the section. Roughness is only included if the overall roadway length is greater than 0.5 miles and the posted speed limit is greater than or equal to 25 mph.

### **Index Formulas for Distress Measurement Method:**

The method used to convert distress measurements into index values is shown below. The Surface Condition Rating and Pavement Condition Rating are calculated based on these index values.

#### **Alligator Crack Index for Manual Rating:**

$$AC\_INDEX = 100 - 40 * (\%ALLIGATOR / 15)$$

Where:

$\%ALLIGATOR$  = Percent of total area of section being rated that contains Alligator cracking.

#### **Longitudinal Crack Index for Manual Rating:**

$$LC\_INDEX = 100 - 40 * [(\%LOW / 175) + (\%MED / 75)]$$

Where:

$\%LOW$  = Percent length of longitudinal cracks where crack width  $\leq 0.25$  inches

$\%HIGH$  = Percent length of longitudinal cracks where crack width  $> 0.25$  inches



**Transverse Crack Index for Manual Rating:**

$$\text{TC\_INDEX} = 100 - 40 * [(\text{LOW} / 21.1) + (\text{MED} / 4.4)]$$

Where:

LOW = Count of the total number of transverse cracks within the section length where one transverse crack is equal to the lane width and the crack width  $\leq 0.25$  inches

HIGH = Count of the total number of transverse cracks within the section length where one transverse crack is equal to the lane width and the crack width  $> 0.25$  inches

Number of cracks is computed as:

$$\text{Total length of transverse cracks/Lane width}$$

**Patching Index for Manual Rating:**

$$\text{PATCH\_INDEX} = 100 - 40 * (\% \text{PATCHING} / 80)$$

Where:

**%PATCHING** = Percentage of pavement section that contains patching/potholes.

**Rutting Index for Manual Rating:**

$$\text{RUT\_INDEX} = 100 - 40 * (\% \text{RUTTING} / 205)$$

Where:

**%RUTTING** = Percentage length of rutting within the section being measured.

## **Method for Manually Rating Paved Parking Areas and Non-Linear Roads**

Parking areas are evaluated based on a visual inspection using condition rating criteria that has been developed by FHWA. This criteria is based on a visual evaluation of the severity and extent of distresses to determine the overall condition of the parking area. This overall condition rating is linked to the level of repair and rehabilitation practices required.

A distress index is determined for each of the distresses listed below for Asphalt and Concrete Parking areas. The overall Pavement Condition Rating (PCR) of the parking lot is driven by the most severe distress present.

### **Rating Criteria:**

#### **Asphalt Parking Distress Types**

- Alligator Cracking
  - Rating based on percentage of road surface affected
- Longitudinal, Transverse and Block cracking
  - Rating based on crack width, crack spacing, and percentage of surface affected
- Rutting and Distortions
  - Rating based on percentage of road surface affected
- Hot Mix Asphalt Patches
  - Rating based on overall percentage of HMA patches
- Potholes and Cold Patches
  - Rating based on percentage of road surface affected
- Surface Raveling and Bleeding
  - Rating based on percentage of road surface affected

#### **Concrete Parking Distress Types**

- Slab Faulting at Joints
  - Rating based on height differential between adjacent slabs or pieces of broken slabs
- Slab Cracking and breakup
  - Rating based on quantity of cracks and if slab is acting to able distribute load as designed
- Surface Delamination and Pop-outs
  - Rating based on percentage of road surface affected to include pop-outs, spalls and surface delamination
- Joint Distresses
  - Rating based on sealant condition and concrete distresses at/or adjacent to joints
- Patching
  - Rating based on percentage of road surface affected

## Glossary of Terms and Abbreviations

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| <b>TERM OR ABBREVIATION</b> | <b>DESCRIPTION OR DEFINITION</b>   |
|-----------------------------|--|
| AC                          | Alligator Cracking   |
| CRS                         | Condition Rating Sheets (Section 5)  |
| Curb Recommendation         | Curb remediation based on overall percentage of curb distress  |
| Curb Reveal                 | Height of curb exposed from gutter flow line to top of curb  |
| DCV                         | Data Collection Vehicle  |
| Excellent                   | Excellent rating with an index value of 95 to 100  |
| Fair                        | Fair rating with an index value from 61 to 84  |
| FUNCT_CLASS                 | Functional Classification (see Route ID, Section 2)  |
| Good                        | Good rating with an index value from 85 to 94  |
| IRI                         | International Roughness Index  |
| HPMA                        | Highway Pavement Management Application  |
| Lane Width                  | Width from road centerline to fogline, or from centerline to edge-of-pavement when no fogline exists |
| LC                          | Longitudinal Cracking  |
| MRR                         | Manually Rated Route   |
| MRL                         | Manually Rated Line  |
| MRP                         | Manually Rated Polygon   |
| N/A                         | Not Applicable   |
| NC                          | Not Collected  |
| PATCH                       | Patching and Potholes  |
| Paved Width                 | Width from edge-of-pavement to edge-of-pavement  |
| PCR                         | Pavement Condition Rating  |
| PKG                         | Parking Area   |
| Poor                        | Poor rating with an index value of 0 to 60   |
| RCI                         | Roughness Condition Index  |
| SC                          | Structural Cracking  |
| SCR                         | Surface Condition Rating   |
| TC                          | Transverse Cracking  |

## **GPS on Manually Rated Roads (MRR)**

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Parking areas, some roads, and other paved areas that are not fully drivable with the Data Collection Vehicle are collected manually by field technicians. GPS is collected for these routes using portable Trimble GPS backpack units. Paved campground pads and driveways are not typically included in the inventory or GPS.

## **Geodatabase – Background and Metadata**

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In addition to this park report, a geodatabase containing both tabular and spatial data specific to this park has been provided. All data disseminated in the preceding report has been obtained from the tables and fields within said geodatabase. The geodatabase can be referenced for tabular data via Microsoft Access or for both tabular and spatial data via ESRI's ArcGIS Suite of software which consists of; ArcMap, ArcCatalog and ArcExplorer. Consolidating the RIP data into one database creates a seamless relationship of tabular and geographic data. It will allow RIP to facilitate easier updates and enhancements in the future. A geodatabase can be thought of as simply a database containing spatial data. Many different tables are contained within the park's geodatabase. A complete and thorough description of the tables and fields contained within this geodatabase can be found in the metadata. The metadata is attached directly within the geodatabase and can be accessed via ESRI's ArcCatalog. The metadata portion of the geodatabase also includes data dictionary report functionality that formats the metadata into an easy to read report.