HAWAII STATE
HISTORIC BRIDGE INVENTORY AND EVALUATION

Prepared for
STATE OF HAWAII
Department of Transportation
Highways Division

Prepared by
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Fung Associates, Inc.

November, 2013

Title Page Images:
1. Umauma Bridge (Hawaii Island)
2. Honolii Stream Bridge (Hawaii Island)
3. Ihiililaukea Stream (Oahu Island)
4. Kealakeha Stream Bridge (Hawaii Island)
5. Kouloual Gulch Bridge (Maui Island)

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Director of Transportation
State of Hawaii
Department of Transportation

FEB 13 2014
Date

Abraham Wong
Division Administrator
Federal Highway Administration
U.S. Department of Transportation

3/13/14
Date
### ACRONYMS & ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AASHO</td>
<td>American Association of State Highway Officials (before 1973)</td>
</tr>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway Transportation Officials (1973 to Present)</td>
</tr>
<tr>
<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
</tr>
<tr>
<td>BPR</td>
<td>Bureau of Public Roads</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CLG</td>
<td>Certified Local Government</td>
</tr>
<tr>
<td>CPL</td>
<td>Commissioner of Public Lands</td>
</tr>
<tr>
<td>DLNR</td>
<td>Department of Land and Natural Resources</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation (Federal)</td>
</tr>
<tr>
<td>DPW</td>
<td>Department of Public Works</td>
</tr>
<tr>
<td>FAP</td>
<td>Federal Aid Primary (route)</td>
</tr>
<tr>
<td>FDR</td>
<td>Franklin Delano Roosevelt</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>HAER</td>
<td>Historic American Engineering Record</td>
</tr>
<tr>
<td>HDOT</td>
<td>State of Hawaii, Department of Transportation, Highways Division</td>
</tr>
<tr>
<td>HHF</td>
<td>Historic Hawaii Foundation</td>
</tr>
<tr>
<td>HRS</td>
<td>Hawaii Revised Statutes</td>
</tr>
<tr>
<td>HSRHP</td>
<td>Hawaii State Register of Historic Places</td>
</tr>
<tr>
<td>H-1</td>
<td>Hawaii Interstate Freeway, designation H-1</td>
</tr>
<tr>
<td>H-3</td>
<td>Hawaii Interstate Highway, designation H-3</td>
</tr>
<tr>
<td>IHS</td>
<td>Interstate Highway System</td>
</tr>
<tr>
<td>KHPRC</td>
<td>Kauai Historic Preservation Review Commission</td>
</tr>
<tr>
<td>LFRD</td>
<td>Load and Resistance Factor Design</td>
</tr>
<tr>
<td>MCR</td>
<td>Maui Cultural Resources Commission</td>
</tr>
<tr>
<td>MOA</td>
<td>Memorandum of Agreement</td>
</tr>
<tr>
<td>NBI</td>
<td>National Bridge Inventory</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>NCHRP</td>
<td>National Cooperative Highway Research Program</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NHPA</td>
<td>National Historic Preservation Act</td>
</tr>
<tr>
<td>NR</td>
<td>Not Rated</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>PRA</td>
<td>Public Roads Administration</td>
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<tr>
<td>SAFETEA-LU</td>
<td>Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users</td>
</tr>
<tr>
<td>SHPD</td>
<td>State Historic Preservation Division</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Officer</td>
</tr>
<tr>
<td>SPW</td>
<td>Superintendent of Public Works</td>
</tr>
<tr>
<td>STURAA</td>
<td>Surface Transportation and Uniform Relocation Assistance Act</td>
</tr>
<tr>
<td>THD</td>
<td>Territorial Highway Department</td>
</tr>
<tr>
<td>TMK</td>
<td>Tax Map Key</td>
</tr>
<tr>
<td>USC</td>
<td>United States Codes and Statutes</td>
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EXECUTIVE SUMMARY

This project is to identify which of the 708 bridges built before 1968 in the State of Hawaii are eligible for listing on the Hawaii State Register of Historic Places (HSRHP) or National Register of Historic Places (NRHP). It should be noted that this bridge inventory does not identify any archaeological or cultural issues and does not propose treatment for each bridge.

The goal for State of Hawaii, Department of Transportation (HDOT) will be to utilize this inventory to develop a Programmatic Agreement with the State Historic Preservation Division (SHPD), the Advisory Council on Historic Preservation (ACHP), and Federal Highways Administration (FHWA) to aid in future consultation with respect to facilitating/stream-lining the approval process for various construction projects. This report is an update of a draft 2008 Inventory and Evaluation completed by The Heritage Center, School of Architecture at the University of Hawaii at Manoa under the supervision of Spencer Leineweber of Honolulu, Hawaii. The scope of work did not involve revisiting the already acceptable historic contexts developed previously and other major elements of the draft 2008 report. This report is based largely on the draft 2008 inventory. County bridges have been added to this inventory as well as bridges built between 1959 and 1968, to reflect bridges that have come of historic age (50 years old or more) since the last report was completed, and those that may be deemed eligible for listing by the year 2018. County bridges were added to the inventory since the Counties fall under the political subdivision category and must follow the same laws and guidelines as HDOT.

It should be noted that while the project team will try to be as comprehensive as possible, there may be bridges that have been missed. These bridges, when discovered, should be added to the inventory in subsequent reports. The goal of HDOT is to update the inventory and the Programmatic Agreement every 5 years.

ROLE OF THE COMMUNITY

As HDOT realizes that community input into the assessment of these bridges is crucial in the future consultation process, private citizens from each county active in the preservation community were encouraged to join the Bridge Committee. Community members who live and work in the various counties were vital to the identification and evaluation process to note local significance for the overall team beyond the visual architectural significance.
INVENTORY SUMMARY

HDOT provided an inclusive list of 1,351 bridges that are included on the National Bridge Inventory (NBI). A number of bridges were excluded from evaluation in this report for one or more of the following reasons:

a) The structure did not meet the standard definition of a bridge;

b) The bridge’s date of construction occurred less than 45 years ago (i.e., later than 1968);

c) It is privately owned with no access and is thus unavailable for evaluation; and

d) It is located along Hawaii Interstate Freeway H-1 and is excluded because of the ACHP adoption of the Section 106 Exemption Regarding Effects to the Interstate Highway System. It should be noted that bridges or tunnels crossing the H-1 which were constructed prior to 1968 were included in the inventory.

The final number of bridges evaluated in this report totals 708 bridges.

The following table summarizes the number of bridges in each of the preservation categories. The criteria for each category are discussed in Section III, Summary of Identification and Evaluation Methods.

<table>
<thead>
<tr>
<th>Island</th>
<th>Eligible</th>
<th>High Preservation Value</th>
<th>Non-Contributing</th>
<th>Not Eligible</th>
<th>Program Comments</th>
<th>Total</th>
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<td>Maui District</td>
<td>15</td>
<td>49</td>
<td></td>
<td>10</td>
<td>13</td>
<td>87</td>
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<tr>
<td>Maui County</td>
<td>4</td>
<td>16</td>
<td>4</td>
<td>7</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Kauai District</td>
<td>7</td>
<td>14</td>
<td>4</td>
<td>8</td>
<td>20</td>
<td>53</td>
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<td>Kauai County</td>
<td>4</td>
<td>12</td>
<td></td>
<td>3</td>
<td></td>
<td>19</td>
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<tr>
<td>Oahu District</td>
<td>48</td>
<td>37</td>
<td>1</td>
<td>31</td>
<td>67</td>
<td>184</td>
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<tr>
<td>Oahu County</td>
<td>38</td>
<td>14</td>
<td></td>
<td>15</td>
<td>77</td>
<td>144</td>
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<td>Hawaii District</td>
<td>30</td>
<td>23</td>
<td></td>
<td>10</td>
<td>34</td>
<td>97</td>
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<tr>
<td>Hawaii County</td>
<td>30</td>
<td>43</td>
<td>1</td>
<td>10</td>
<td>8</td>
<td>92</td>
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<tr>
<td>TOTAL</td>
<td>176</td>
<td>208</td>
<td>10</td>
<td>94</td>
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<td>219</td>
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Historic bridge districts are enumerated below.

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<thead>
<tr>
<th>Island</th>
<th>Register Listing</th>
<th>Historic District Name</th>
<th>Proposed Historic District Name</th>
<th>Bridges in District</th>
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<tbody>
<tr>
<td>Hawaii</td>
<td>State</td>
<td>Old Mamalahoa Highway</td>
<td>Post-War Hawaii Belt Road, Multiple Property</td>
<td>42</td>
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<tr>
<td>Hawaii</td>
<td>n/a</td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Hawaii</td>
<td>State</td>
<td>Steel Trestle Bridges, Multiple Property</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Kauai</td>
<td>National</td>
<td>Kauai Belt Road</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Maui</td>
<td>National</td>
<td>Hana Highway</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Oahu</td>
<td>n/a</td>
<td></td>
<td>Pali Highway</td>
<td>21</td>
</tr>
</tbody>
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