NPS Form 10-900 (Rev. Aug. 2002)	(Exp. BECE 2005 D 2280
United States Department of the Interior National Park Service	065 OCT 07 2008
NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM	NAT. REGISTER OF HISTORIC PLACES NATIONAL PARK SERVICE
This form is for use in nominating or requer properties and districts. See instructions of Historic Places Registration Form (National item by marking "x" in the appropriate box If any item does not apply to the property applicable." For functions, architectural significance, enter only categories and substantiational entries and narrative items on a typewriter, word processor, or computer,	in How to Complete the National Register and Register Bulletin 16A). Complete each or by entering the information requested. being documented, enter "N/A" for "not classification, materials, and areas of ecategories from the instructions. Place continuation sheets (NPS Form 10-900a). Use
1. Name of Property	
historic nameKa`ahumanu Avenue - Naniloa	Drive Overpass
other names/site number Naniloa Drive Overp	eass, Naniloa Drive/Highway Underpass
street & number Naniloa Drive at Kaahumanu city or town Wailuku state Hawai code HI county Maui zip code 96793	vicinity N/A
3. State/Federal Agency Certification	
As the designated authority under the National hereby certify that this X nomination eligibility meets the documentation standar National Register of Historic Places and merequirements set forth in 36 CFR Part 60. does not meet the National Register Criteric considered significant nationally X statewide locally. (See continuations)	request for determination of description of descrip
May a. Minh	10/1/08
Signature of certifying official Denty State (Historian State (Historian State or Federal Agency or Tribal government meets)	re Preservation Palicer
In my opinion, the property meets criteria. (See continuation sheet for	does not meet the National Register
Signature of commenting official/Title	Date

State or Federal agency and bureau

4. National Park Service Certification
entered in the National Register See continuation sheet. determined eligible for the National Register See continuation sheet. determined not eligible for the National Register removed from the National Register other (explain):
Signature of Keeper Date of Action
5. Classification
Ownership of Property (Check as many boxes as apply) private public-local X public-State public-Federal Category of Property (Check only one box) building(s) district site X structure object
Number of Resources within Property Contributing Noncontributing buildings sites structures objects Total
Number of contributing resources previously listed in the National Register N/A Name of related multiple property listing (Enter "N/A" if property is not part of multiple property listing.) N/A

6. Function o	
Historic Funct	ions (Enter categories from instructions) nsportation Sub: road-related
	ons (Enter categories from instructions) ransportation Sub: road-related
7. Description	
Architectural	Classification (Enter categories from instructions)
foundat	er categories from instructions) ion reinforced concrete
_	concrete, wood, asphalt masonry (basalt or lava rock)
Narrative Desc one or more co	ription (Describe the historic and current condition of the property on intinuation sheets.)
8. Statement o	f Significance
Applicable Nat	ional Register Criteria (Mark "x" in one or more boxes for the criteria property for National Register listing)
X_ A	Property is associated with events that have made a significant contribution to the broad patterns of our history.
В	Property is associated with the lives of persons significant in our past.
<u>x</u> c	Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
D	Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Consider	ations (Mark "X" in all the boxes that apply.)
A ow	med by a religious institution or used for religious purposes.
B re	emoved from its original location.
C a	birthplace or a grave.
D a	cemetery.
E a	reconstructed building, object, or structure.
F a	commemorative property.
	less than 50 years of age or achieved significance within the past 5 years.
Areas of Signific	ance (Enter categories from instructions) Engineering Transportation
Period of Signifi	
Significant Dates	
Significant Perso	on (Complete if Criterion B is marked above) N/A
Cultural Affiliat	ion N/A
Architect/Builder	William Bartels, Territorial Highway Engineer
Hawaiian Contract	ing Company, builder
Narrative Stateme	ent of Significance (Explain the significance of the property on one ion sheets.)
9. Major Bibliogr	raphical References articles, and other sources used in preparing this form on one or sheets.)
requested. previously li previously de designated a recorded by H	ation on file (NPS) letermination of individual listing (36 CFR 67) has been sted in the National Register letermined eligible by the National Register National Historic Landmark listoric American Buildings Survey #
	ent

USDI/NPS	NRHP	Regi	stration	Form	
Ka`ahuman	nu Dr	ive -	Naniloa	Drive	Overpass
Maui Cour	nty, I	Hawai	i		

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Acreage of Property _approximately 2 acres
UTM References (Place additional UTM references on a continuation sheet)
Zone Easting Northing Zone Easting Northing 1
Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)
The nominated property is an irregularly shaped parcel at the intersection of Ka`ahumanu Avenue and Naniloa Drive. The bridge is centered on the previously listed UTM reference. A map of the property boundaries is attached.
Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)
The boundaries encompass the property that is historically associated with the structure. The nominated structure includes the entire bridge, all masonry retaining walls, timber guardrails along the exit/entrance ramps and sidewalk, and the property on which these are situated. The property is entirely within the Hawai'i Department of Transportation right-of-way.
11. Form Prepared By
name/title_ Dawn E. Duensing, Cultural Resources Planner
organization Maui County Planning Department date 10/16/04
street & number 250 S. High Street telephone (808)270-7841
city or town Wailuku state HI zip code 96793
Additional Documentation
Submit the following items with the completed form: Continuation Sheets
Maps A USGS map (7.5 or 15 minute series) indicating the property's location. A sketch map for historic districts and properties having large acreage or numerous resources.
Photographs Representative black and white photographs of the property.
Additional items (Check with the SHPO or FPO for any additional items)

USDI/	NPS	NRHP	Regi	stration	Form	
Ka ah	numan	u Dri	ive -	- Naniloa	Drive	Overpass
Maui	Coun	ty, I	Hawai	i`i		

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(Complete this item at the request of the S	SHPO or FPO.)
nameState of Hawai`i Department of Trans	sportation
	telephone (808) 587-2150
street & number 869 Punchbowl Street	terephone(808/387-2130

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.). A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number.

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to Keeper, National Register of Historic Places, 1849 "C" Street NW, Washington, DC 20240.

OMB No. 1024-0018

NPS Form 10-900-a (8-86)

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NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section	7	Page	1	Ka`ahumanu Avenue - Naniloa Drive Overpass_
				Maui, Hawai`i
	====:			

Designed by Territorial Highway engineer William Bartels, the Ka`ahumanu Avenue-Naniloa Drive Bridge is a rigid-frame concrete bridge with cantilever ends that spans a gap in Wailuku's "Sand Hills" as it carries Naniloa Drive over Ka`ahumanu Avenue. Prominently situated at the crest of a hill, the bridge has served as a distinctive gateway into Wailuku for nearly seventy years. Built as a grade-separation structure in 1936, the bridge's architectural details and rigid-frame construction are unique on Maui.

The Ka`ahumanu Avenue-Naniloa Drive Bridge is constructed entirely of reinforced concrete. It features parapets with cross-shaped voids and raised rail caps that were typical of many 1930s-era bridges on Maui. The Art Deco ornamentation, expressed on the vertically articulated piers and the horizontal relief on the bridge walls, is unique on Maui. The cross-shaped voids, rail caps, and articulated piers are painted in contrasting colors to highlight the architectural details. The construction date, 1936, is inscribed on the structure's southeast and northwest end piers. The structure's single-span is 51'-0" long; the overall structure length is 63'-0". The bridge height above the road is 14'-7". The bridge's roadway measures 20'-0" wide, with sidewalks on both sides measuring 2'-6" wide. Completed in 1937, the bridge cost \$12,700 and was built by the Hawaiian Contracting Company. The structure required 271 cubic yards of concrete and 46,600 pounds of reinforcing steel. The Ka`ahumanu Avenue-Naniloa Drive Overpass is unaltered and in good condition, with only minor repairs. Most of the repairs are the result of vehicle impacts on the bridge's girders.

The Ka`ahumanu Avenue-Naniloa Drive Bridge retains a high level of historic integrity in its location, design, workmanship, materials, and feeling. Its original design and workmanship are evident in the decorative Art Deco piers and railings. When the bridge was built in 1936, the Sand Hills was a residential area and the bridge was flanked by adjacent residences and utility poles. The bridge's setting has urbanized over time; the nearby residential neighborhoods and commercial enterprises now have a higher density. Despite Wailuku's more urbanized setting, the bridge retains its prominent setting at the crest of a long hill where Ka`ahumanu Avenue enters Wailuku. Motorists approaching the bridge still enjoy beautiful views of the West Maui Mountains much as they did in 1936 when the bridge was built. The bridge itself is visible for more than a mile as motorists approach Wailuku.

The Ka`ahumanu Avenue-Naniloa Drive Bridge is complemented by timber guardrails and cut basalt (lava rock) masonry retaining walls that contribute to the bridge's historic feeling. On the west side of the bridge along Ka`ahumanu Avenue are entrance and exit ramps providing access to and from Naniloa Drive. These ramps are protected by timber guardrails on timber posts. On the structure's northeast side, a timber guardrail with concrete posts is situated along a sidewalk that ascends to the overpass. Masonry retaining walls constructed of cut basalt flank all sides of the structure and add to the historic character of the bridge. Another retaining wall, also built of basalt, runs along and above the entrance ramp from Ka`ahumanu Avenue. The basalt masonry walls are excellent examples of traditional local craftsmanship.

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The Naniloa Drive - Ka`ahumanu Avenue Bridge achieves state and local significance in the areas of engineering and transportation under criteria A and C. One of the earliest remaining rigid-frame bridges built in the Territory of Hawai`i, the structure is one of two such bridges built in Hawai`i in 1936. The bridge represents the advances in engineering technology being achieved in Hawai`i during the early twentieth century. The Ka`ahumanu Avenue-Naniloa Drive Bridge is one of only two grade-separation structures on Maui, the other being the nearby Wai`ale Drive Bridge, which is already listed on the National Register of Historic Places. The completion of these grade-separation structures, together with a 1.9 mile road linking Wailuku and Kahului, improved travel time and motorist safety while also providing jobs during the Great Depression.

William Bartels, Territory of Hawai'i Bridge Engineer, introduced the rigid-frame bridge to Hawai'i in 1936. Bartels realized that the rigid-frame bridge was an excellent engineering solution for separating the grades at the new intersection at Naniloa Drive and Kaahumanu Avenue. Developed in New York by Arthur Hayden in 1922, the rigid-frame bridge was especially suited for grade-separation structures where the distance between the roadway grades was restricted and the length of the approaches important. Bartels realized that a rigid-frame bridge would fit neatly into the narrow gap bulldozed through Wailuku's "Sand Hills." From an engineering perspective, he understood that Hayden's sophisticated technology offered greater structural strength than other bridges of the era, especially girder bridges. His bridge derived its strength from the rigid connection between the structure's vertical and horizontal members, which spread the load more evenly throughout the entire bridge. structure was no longer supported only by its abutments as girder bridges were, instead, the rigid-frame bridge was an integral unit with all members working together to support the structure and its loads. Another attractive feature of rigid-frame construction was its economy. Greater structural strength resulted in a more efficient use of materials, which permitted a narrower cross section that required considerably less excavation and concrete. Greater economy meant that Bartels could further stretch the Territory's dollars for public highway projects.

In addition to being a modern, practical structure, Hayden designed the rigid-frame bridge to be aesthetically pleasing, with a form that mimicked the graceful appearance of conventional arch bridges. Bartels realized that the intrinsic form of the bridge made it a good choice for settings where an aesthetic bridge was required, such as the prominent hilltop at the entrance to Wailuku. The structure was also readily adaptable to a variety of architectural treatments. Although Bartel's choice of a rigid-frame technology was unique on Maui, his open parapet with cross-patterned voids was typical of Hawai`i's 1930s bridges. The Art Deco elements, however, reflected the popular stylistic influences of the era and rendered the structure as one of Maui's most architecturally distinguished bridges. The rigid-frame engineering, unique architectural details, and prominent location at the crest of a hill leading into Wailuku made the Naniloa Drive-Kaahumanu Avenue Overpass an attractive gateway into Maui's county seat. Seventy years after its construction, the bridge has become a renowned Wailuku landmark that is specifically recognized by the county's Wailuku-Kahului Community Plan as culturally significant.

The Naniloa Drive Ka`ahumanu Avenue Overpass is a fine example of Hawai`i's juxtaposition between modern technology and traditional building methods. While the

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				Maui, Hawai`i

structure represented the latest in bridge engineering technology, the adjacent retaining walls reflected traditional construction techniques that relied on native lava rock (basalt) masonry. Local basalt was a common bridge construction material in the late 1800s when masonry arch bridges were built. In 1905, the Territorial Superintendent of Public Works recommended that reinforced concrete be used to build Hawai'i's bridges. Even after the superintendent's recommendations, basalt masonry continued to be used for bridge abutments, wingwalls, guardwalls, and retaining walls. Just as the Naniloa Drive Overpass exhibits fine, modern architectural details and workmanship, the cut-rock retaining walls are excellent examples of traditional local craftsmanship.

The Naniloa Drive - Ka`ahumanu Avenue Bridge was part of a major bridge and road-building project on Maui in 1936. These projects demonstrated that Maui directly benefited from the U.S. Government's efforts to improve the nation's transportation facilities, but perhaps more importantly, to improve traffic safety. As with the rest of the nation, transportation funding played a major role in providing jobs during the Great Depression. Although no documentation was located to determine whether federal funding was appropriated for the Naniloa Drive bridge, it is extremely likely that federal funds were used since the U.S. Government funded the other components of this project, the Wai`ale Drive Bridge and the new road into Wailuku.

The Wailuku-Kahului Road, now known as Ka'ahumanu Avenue, was constructed to provide direct access between Maui's port town of Kahului and its county seat and commercial center, Wailuku. The new 1.9-mile road cut through the Sand Hills and replaced a beach road between the two towns, reducing the trip by one mile. Important safety features of the new thoroughfare were grade-separation structures at Naniloa and Wai ale Drives. The Wai ale Drive Bridge, funded by the Emergency Relief Appropriation Act of 1935, was built to carry Kaahumanu Avenue traffic over Wai ale Drive and the adjacent railroad tracks. The other grade-separation structure was built to carry Ka ahumanu Avenue under Naniloa Drive. Both bridges were built during the federal government's nation-wide effort to improve traffic safety by means of grade-separation structures. The combination of these three projects was a significant transportation achievement on Maui. The new road and grade-separation structures improved travel time between Maui's two main towns while also providing increased safety. These projects were also an important part of the Federal aid highway program in Hawai'i. The mid 1930s were boom years for bridge and road construction in the Territory of Hawai'i, as it was finally granted federal road aid that had been denied between 1917 and 1925. Many of these road and bridge programs were also an important part of Great Depression relief efforts.

The Ka`ahumanu Avenue - Naniloa Drive Overpass was designed by William R. Bartels and built by the Hawaiian Contracting Company. Bartels came to Hawai`i in 1932 and was an engineer for the Territorial Department of Public Works until his retirement in 1957. Hawai`i's most renowned bridge engineer, Bartels was responsible for many of the Territory's major bridge projects including the 1936 Wahiawa Bridge on Kauai, which is also a rigid-frame structure, and the 1936 Kupapaulua Bridge on Hawai`i, a concrete-arch bridge. Bartels is credited with designing and building bridges that combined the most modern technology available with aesthetically-pleasing architectural features, as is evidenced in the Ka`ahumanu Drive - Naniloa Drive Overpass.

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Ka	ahuman	u Avenue	-	Naniloa	Drive	Overpass
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Major Bibliographical References

- Duensing, Dawn E. Bronx River Parkway, HAER No. NY-327. [Washington D.C.]: National Park Service, Historic American Engineering Record, 2001.
- Hayden, Arthur G. and Maurice Barron. The Rigid-Frame Bridge. Third Edition. NY: John Wiley & Sons, Inc. 1950.
- Spencer Mason Architects. State of Hawai`i Historic Bridge Inventory and Evaluation.

 Draft. [Honolulu]: State of Hawai`i Department of Transportation, Highways
 Division, 1996.
- Superintendent of Public Works. Annual Report. [Honolulu]: Superintendent of Public Works. 1905, 1936.

The Maui News, 1936.

Wailuku - Kahului Community Plan. [Wailuku, HI]: Maui County Council, 2002.

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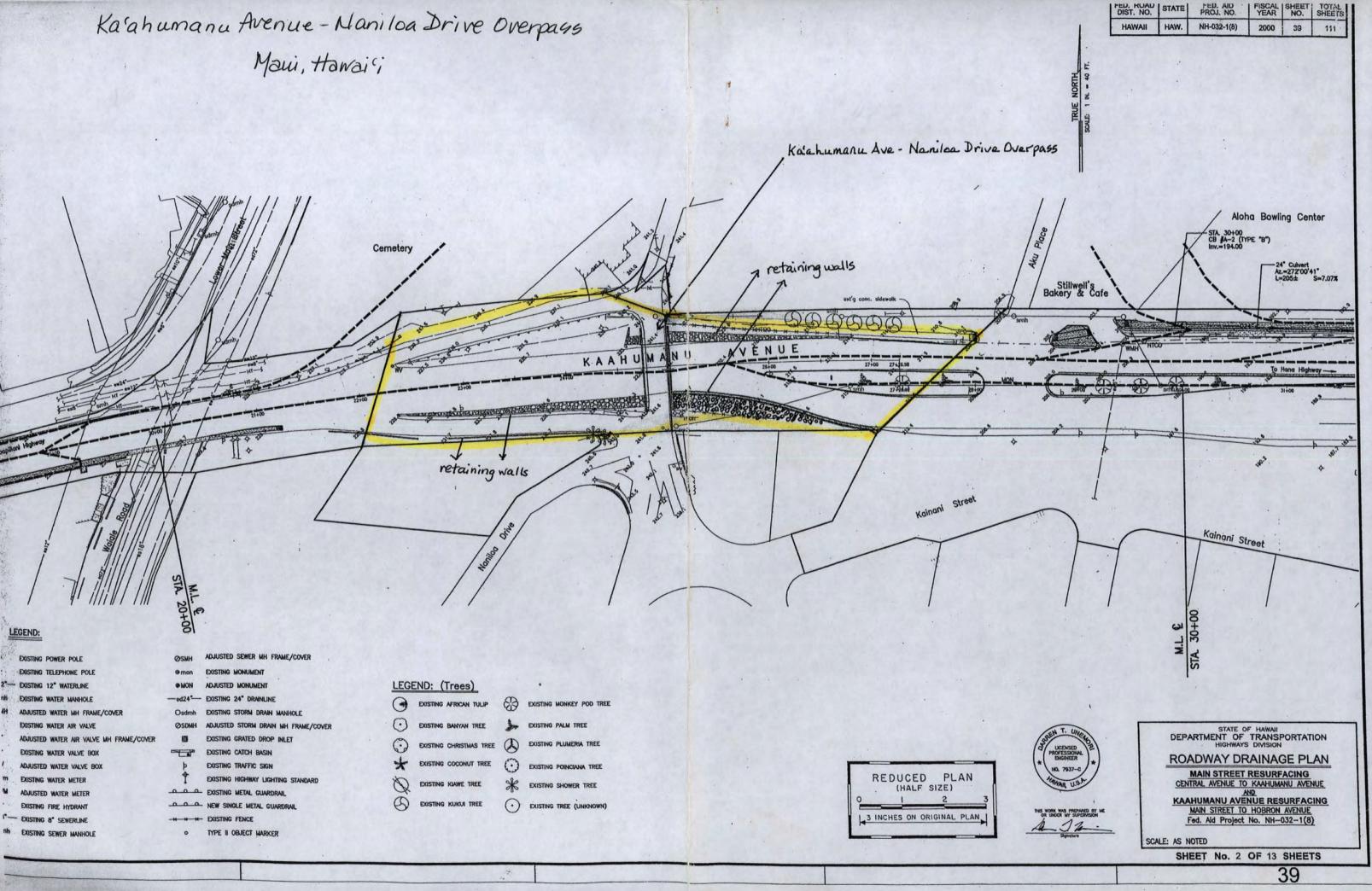
NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section Additional Documentation: Photographs

Ka`ahumanu Avenue - Naniloa Drive Overpass Maui, Hawai`i

Photographs were taken by Dawn E. Duensing, who has the negatives.

- 1. Ka`ahumanu Avenue Naniloa Drive Overpass
- 2. Maui County, Hawai i
- 3. Dawn E. Duensing
- 4. September 12, 2004
- 5. Dawn E. Duensing
- 6. Ka`ahumanu Avenue Naniloa Drive Overpass, retaining walls and guardrails; view looking west
- 7. Photograph #1
- 3. Dawn E. Duensing
- 4. September 12, 2004
- 5. Dawn E. Duensing
- 6. Ka`ahumanu Avenue Naniloa Drive Overpass, retaining walls and guardrails; view looking east
- 3. Dawn E. Duensing
- 4. September 12, 2004
- 5. Dawn E. Duensing
- 6. Ka`ahumanu Avenue Naniloa Drive Overpass, view of roadway and bridge; looking north
- 3. Dawn E. Duensing
- 4. September 12, 2004
- 5. Dawn E. Duensing
- 6. Ka`ahumanu Avenue Naniloa Drive Overpass, northwest pier with inscribed date of construction; view looking west



UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Ka'ahumanu AvenueNaniloa Drive Overpass NAME:
MULTIPLE NAME:
STATE & COUNTY: HAWAII, Maui
DATE RECEIVED: 10/07/08 DATE OF PENDING LIST: 10/27/08 DATE OF 16TH DAY: 11/11/08 DATE OF 45TH DAY: 11/20/08 DATE OF WEEKLY LIST:
REFERENCE NUMBER: 08001065
REASONS FOR REVIEW:
APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N
COMMENT WAIVER: N
ACCEPT RETURN REJECT // 19.08 DATE
ABSTRACT/SUMMARY COMMENTS:
Entered in The National Register of Historic Places
RECOM./CRITERIA
REVIEWER DISCIPLINE
TELEPHONE DATE
DOCUMENTATION see attached comments Y/N see attached SLR Y/N
If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.



Ka'ahumanu Ave - Naniloa Drive Overpass, Maui, Hawai'i # 1



Ka'ahumanu Ave- Naniloa Drive Overpass, Maui, Hawaii, # 2



Kalahumanu Ave - Naniloa Drive Overpass, Maui, Hawaii, # 3



Karahumanu Ave - Naniloa Drive Overpass, Maui, Hawaisi #4

LINDA LINGLE





STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621

LAURA H. THIELEN CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
MMISSION ON WATER RESOURCE MANAGEME

> RUSSELL Y. TSUJI FIRST DEPUTY

KEN C. KAWAHARA DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BURBAU OF CONVEY ANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIPE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND LAND STATE PARKS

DOC NO: 0810AL01

OCT 07 2008 NAT. REGISTER OF HISTORIC PLACES Architecture NATIONAL PARK SERVICE

October 1, 2008

Ms. Janet Snyder Matthews Associate Director, Cultural Resources Keeper of the Register United States Department of the Interior National Park Service National Register Program (MS 2280) 1201 "Eye" Street, N.W. Washington, D.C. 20005

Dear Ms. Matthews:

SUBJECT: **National Register Nomination**

Ka'ahumanu Avenue—Naniloa Drive Overpass

Wailuku, Island of Maui

We respectfully submit to you the above nomination. We ask that this site be considered for listing on the National Register of Historic Places. Please call Dr. Astrid Liverman at (808) 692-8028 (Astrid.M.Liverman@hawaii.gov) with your comments or should you have any questions. Thank you for your consideration.

Sincerely,

Nancy A. McMahon Deputy State II Deputy State Historic Preservation Officer

AMBL: