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GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS
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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

August 22, 2008

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: Request for Approval of the Placement of Hazard Warning and Management Signs on Improved Public Lands at Various Locations Under the Jurisdiction of the Division of State Parks on Kauai and Oahu Pursuant to Act 82, Session Laws of Hawaii, 2003

Act 82, Session Laws of Hawaii, Relating to Public Land Liability, established a process for installing and maintaining warning signs on improved public lands, and provides the State and Counties with protection from liability for damages caused by the dangerous natural conditions that are identified through the signage. Pursuant to Act 82, the Board of Land and Natural Resources ("Board") will review and approve the design and placement of these signs. The Board, following the recommendations of the Risk Assessment Working Group, previously approved the sign designs and sign placement at a number of park and trail locations.

Sign Placement Criteria

Pursuant to Chapter 13-8, Hawaii Administrative Rules ("HAR"), the following guidelines have been used for determination of the placement of signage:

Section 13-8-9 Public use and exposure.

- (a) Traffic patterns and managed access points of people accessing the improved public lands shall be considered when placing signs.
- (b) The type, frequency, and location of incidents or potential public exposure relating to specific dangerous natural conditions when known on the improved public lands shall be considered when placing signs.

Section 13-8-10 Placement.

Sign(s) shall be placed at or near access points; i.e., along vehicle and pedestrian traffic corridors in clearly visible locations placed as close as possible to the potentially dangerous natural conditions on improved public lands and at managed and designed entrances where the signs will

be seen as users enter improved public lands. View sheds, aesthetics, and feasibility of installation shall be considered in the placement of the signs. Signs shall be installed with consideration for the average adult line of sight but outside of the general path of travel to avoid physical contact with the signs. Signs may be attached to posts or by any other method of installation depending on the nature of the location and terrain.

The sign locations are proposed for the following areas:

1. Kalalau Beach, Napali Coast State Park, Kauai: Natural hazard signs – Warning Falling Rocks and Danger Falling Rocks; and Management signs – Area Closed.

A draft evaluation by Earth Tech, Inc., identified potential high hazard rockfall areas at various locations on the Kalalau Trail in the Kalalau Beach section of the park. The evaluation was initiated after a rock punctured through a camper's tent in the area near the beach's waterfall feature.

As of April 2008, the affected section of the Kalalau Trail was closed including the waterfall camping area, trail section accessing the composting toilet facility, and the trail section from the waterfall to a juncture where the trail splits into a mauka and makai route. State Parks' staff posted interim rockfall warning and trail closure signs along these sections of the Kalalau trail and established beach accesses to the trail. To maintain public health in the area, a new makai route to the composting toilet facility has been established to provide campers and park users with a new access to replace the previous trail access.

The trail closure is timely as the summer camping season starts from mid-May through mid-September and 60 campers are allowed daily. The campground is usually filled to capacity. Currently, State Parks is pursuing additional public safety measures such as identifying alternative camping areas; rockfall mitigation measures such as rock scaling; a detailed geotechnical assessment; and relocation of camping and sanitation facilities.

State Parks proposes the following signs and locations (refer to Exhibits A.1 through A.4):

Danger – Falling Rocks entry signs at Stations KA00018 – 20; 22 – 26 posted at the established makai access to the closed section of the Kalalau Trail.

Warning – Falling Rocks entry sign at Station KA00021 posted at new makai access to the composting toilet facility. Another entry sign will be posted at Station KA00034 at the Kalalau Trail trailhead at the park's entrance at Ke'e Beach.

Area Closed – Management entry signs at Stations KA00027 - 30 and 33 posted along the closed section of the Kalalau Trail.

Warning – Falling Rocks site specific signs at Stations KA00031 and 32 posted in the camping area at the Java Plum and Milo forest areas.

2. Opaekaa Falls, Wailua River State Park, Kauai: Management signs – Area Closed.
State Parks proposes the posting of two (2) Area Closed signs in locations that may be used to access Opaekaa Falls. One area is along Kuamoo Road in an upper clearing that is steep and does not have an established trailhead; this area has been fenced to safeguard against access to this area. The other area is in a lower clearing that is adjacent to private property which individuals may have entered for access to this clearing. DLNR has been sued regarding two fatalities that occurred near the Falls in 2006.

State Parks proposes the following signs and locations (refer to Exhibit B.1 and B.2; and Exhibit B.3 for site photos):

Area Closed – Management entry signs at Stations KA00034 (upper area) and K00035 (lower area).

3. Sacred Falls State Park, Oahu: Natural hazard sign – Danger Falling Rocks; and Management signs – Area Closed.
The park has been closed since 1999 stemming from the falling rock incident resulting in injuries and fatalities. The management signs are needed to reiterate the formal closure of the park and trail to the Falls. The Danger Falling Rocks sign will be posted in an area of the trail where the valley narrows, to provide warning to anyone accessing this area from adjacent private property.

State Parks proposes the following signs and locations (refer to Exhibit C.1 and C.2):

Area Closed – Management entry signs at Station OA00004 at the entrance of the park's trailhead; Station OA00005 along the trail segment aligned with Kaluanui Stream; and Station OA00006 where the valley narrows to provide notice to anyone entering from the adjacent property.

Danger – Falling Rocks site specific sign at Station OA00007 in the same location as State OA00006.

4. Summit Trail, Diamond Head State Monument, Oahu: Natural hazard signs – Warning Falling Rocks.
A draft assessment by Earth Tech, Inc. identified high rockfall hazard potential in the upper slopes along the Summit Trail system. In 2007, the Monument had over 630,000 visitors and the Trail is the primary attraction as it leads visitors to scenic points at the Summit Lookout at the top of the Crater slopes. This year, to mitigate this potential hazard, State Parks is planning to conduct rock scaling along the upper trail slopes to minimize the rockfall potential followed by permanent mitigation measures which are currently in design.

State Parks proposes the following signs and locations (refer to Exhibits D.1 through D.4 for site photos):

Warning - Falling Rocks entry signs at Station Nos. OA000008 and 11 at the beginning of the Summit Trail and top entry/exit of the pedestrian tunnel. Another entry sign will be posted at Station OA000012 at the Monument's primary entrance at the Kahala Tunnel

Warning- Falling Rocks site specific signs at Station Nos. OA000009 and 10 along segments of the Summit Trail.

5. Nuuanu Pali State Wayside, Oahu: Natural hazard signs – Warning Falling Rocks and Danger Falling Rocks.

Two areas at the lookout warrant concerns: the mountain face on the east-side of the walkway to the lookout and the mauka side of the Old Pali Road that connects with the Lookout's looping walkway. In 2007, this Lookout had the highest visitation of all State Parks, statewide, with over 900,000 visitors.

State Parks is proposing the following signs and locations (refer to Exhibits E.1 through E.3 for site photos):

Danger - Falling Rocks entry signs at Station Nos. OA000012 and 14 in pathway areas before and after the lookout.

Danger - Falling Rocks site specific signs at Station Nos. OA000013 and 15 at specific sites in the area described above.

Attached are Exhibits A through E for entrance and site specific signs warning of dangerous natural conditions and ancillary management conditions.

RECOMMENDATION:

That the Board approve the placement of the signs at the locations as depicted on Exhibits A through E.

Respectfully submitted,



DANIEL S. QUINN
State Parks Administrator

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN, Chairperson

Attachments:

- Exhibit A: Map and images depicting the placement of signs at Kalalau Beach, Kauai
- Exhibit B: Map and images depicting the placement of signs at Opaekaa Falls, Kauai
- Exhibit C: Map and images depicting the placement of signs at Sacred Falls, Oahu
- Exhibit D: Map and images depicting the placement of signs at Diamond Head, Oahu
- Exhibit E: Map and images depicting the placement of signs at Nuuanu Pali, Oahu

Exhibit A.1

Map of sign locations, Kalalau Beach, Napali Coast State Park, Kauai

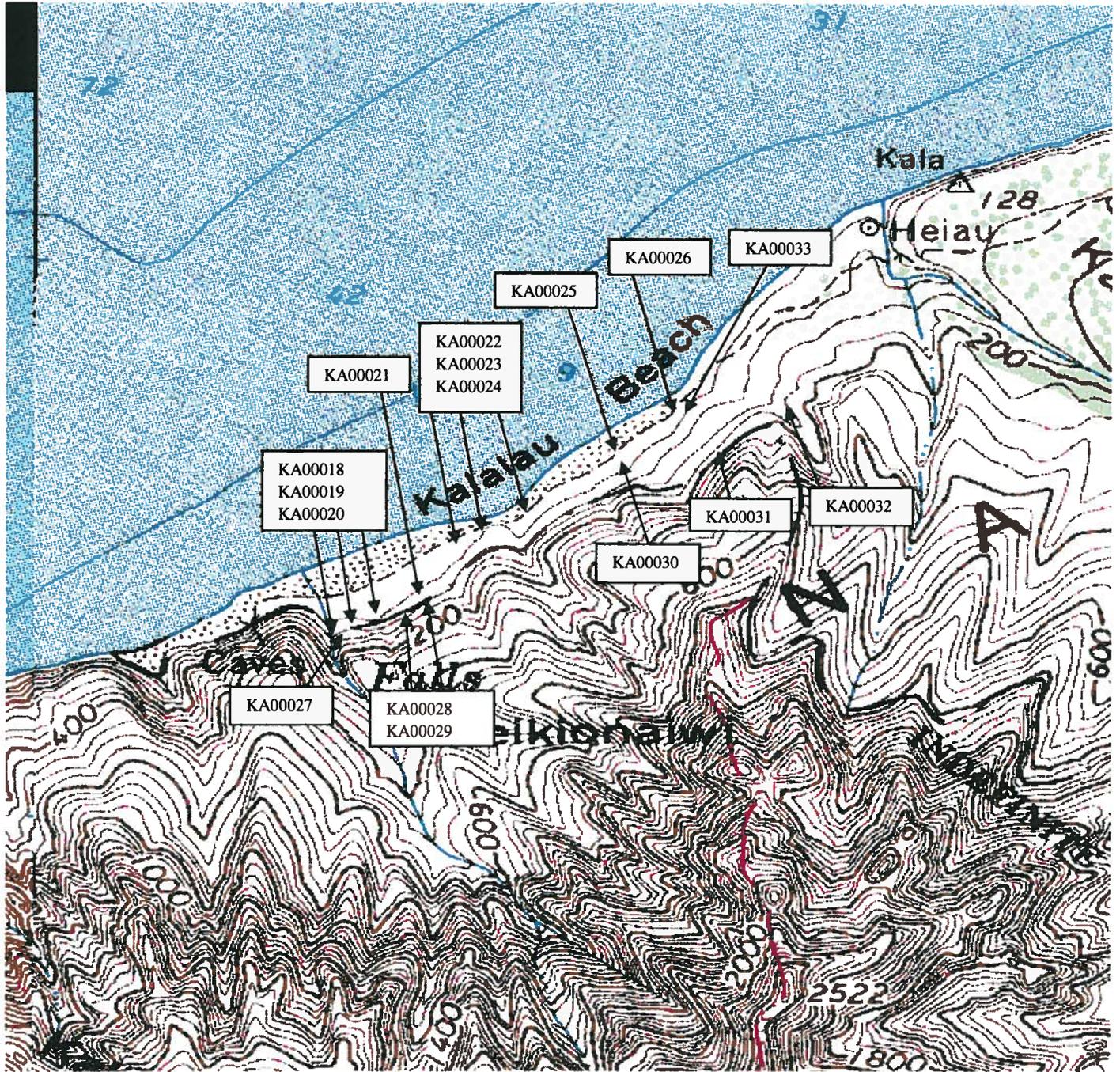


Exhibit A.2 Map of sign location, Kalalau Trailhead, Napali Coast State Park, Kauai

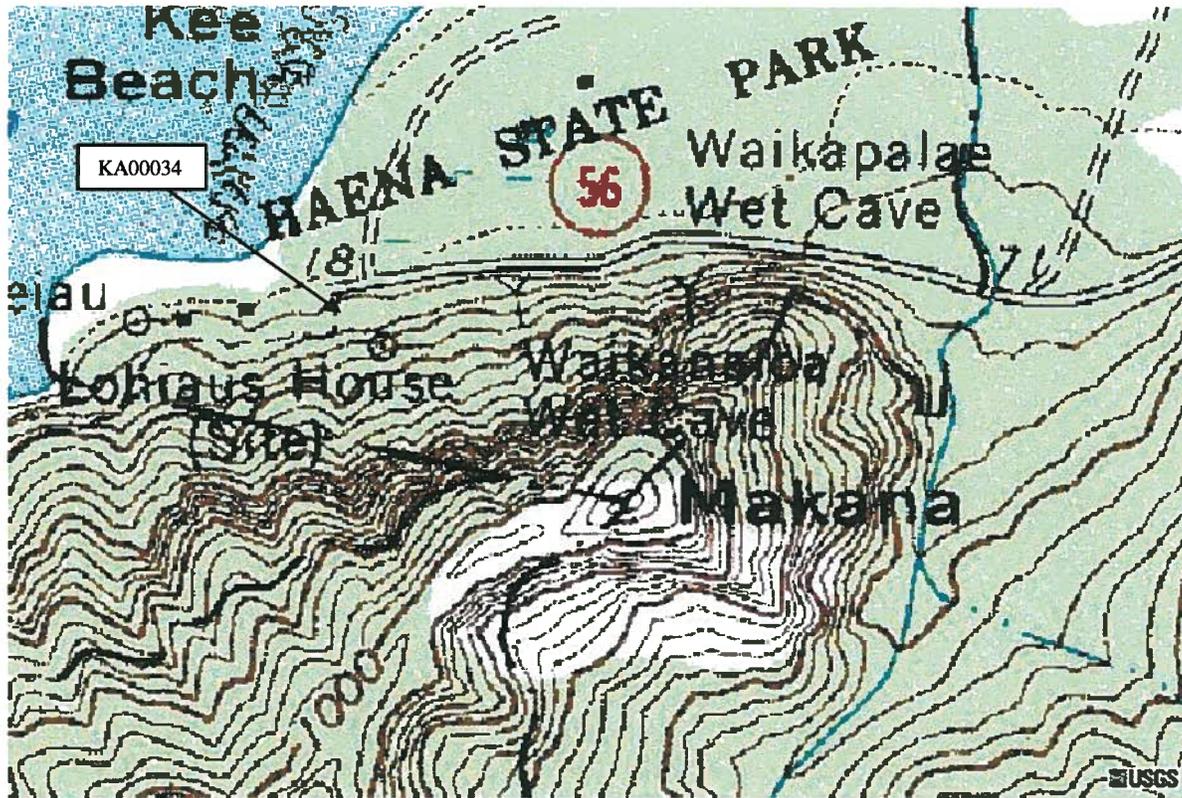


Exhibit A.3 Aerial photo of sign locations, Kalalau Beach, Napali Coast State Park, Kauai

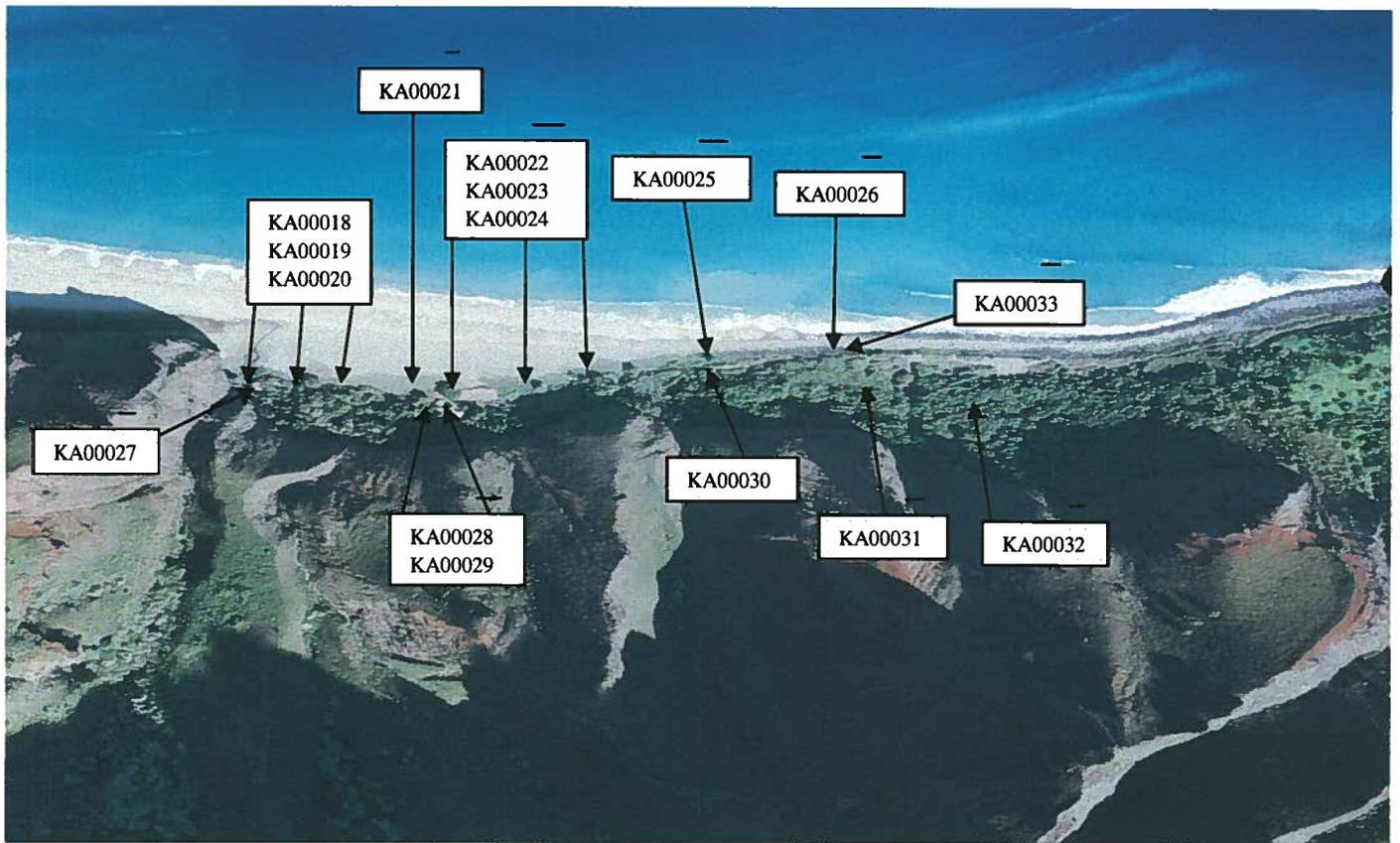


Exhibit A.4 Aerial photo of sign location, Kalalau Trailhead, Napali Coast State Park, Kauai

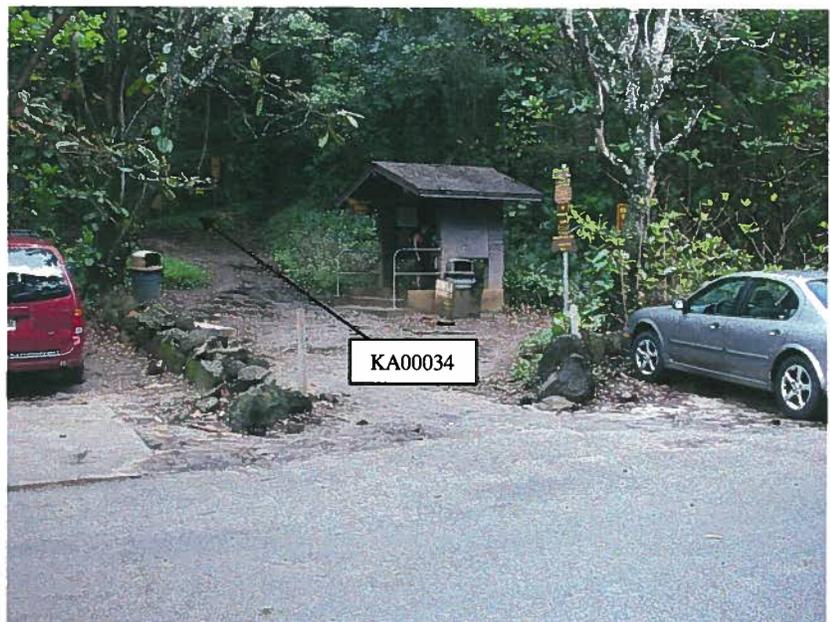


EXHIBIT B

DLNR Division: State Parks Island: Kauai Site/State Park: Opaekaa Falls, Wailua River State Park

Exposure to natural conditions: Hazard cliffs.

Management Signs:

Station KA00034 Area Closed (NACE)
Station KA00035 Area Closed (NACS)

See attached:

Exhibit B.1 Map of sign locations
Exhibit B.2 and B.3 Aerial photo and photos of sign locations

Exhibit B.1 Map of sign locations, Opaekaa Falls, Wailua River State Park, Kauai

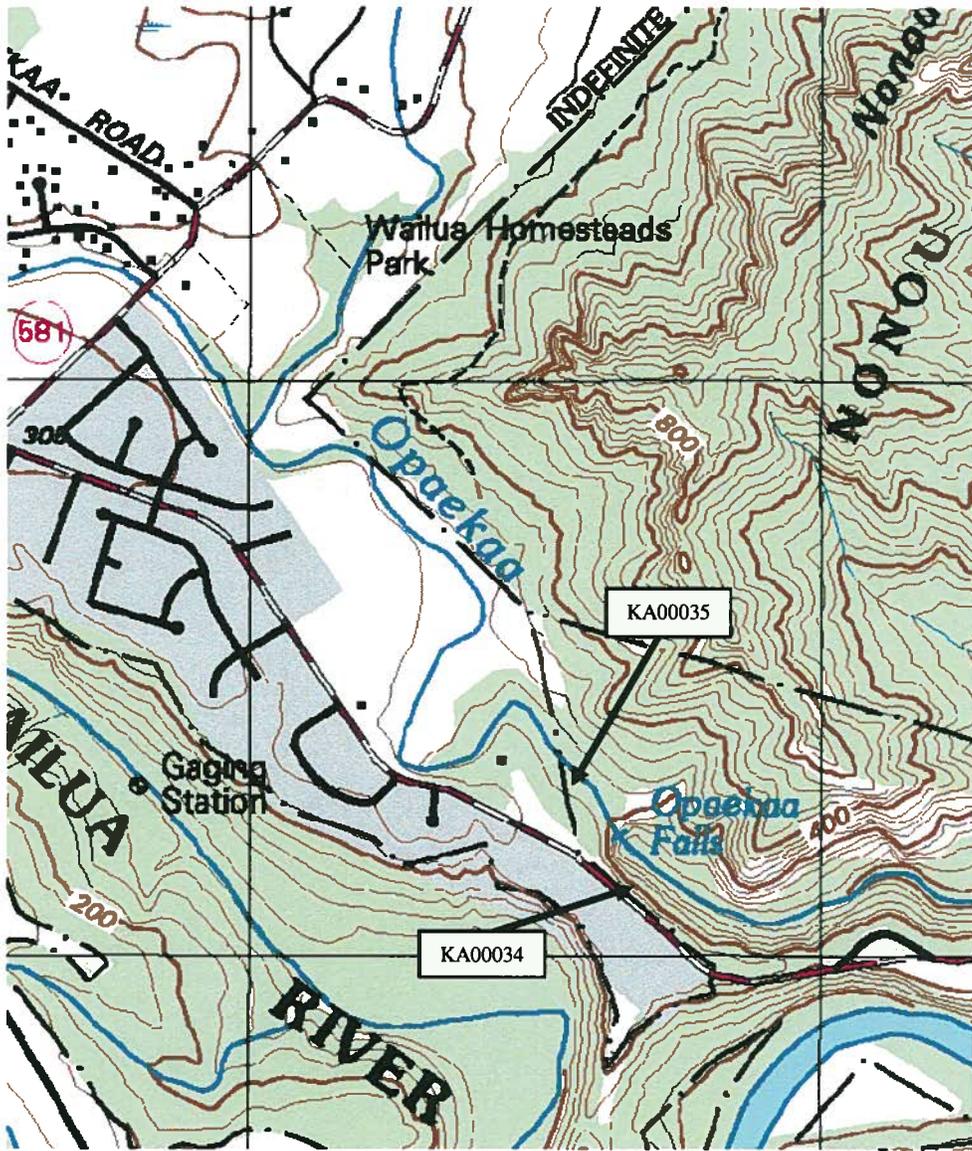
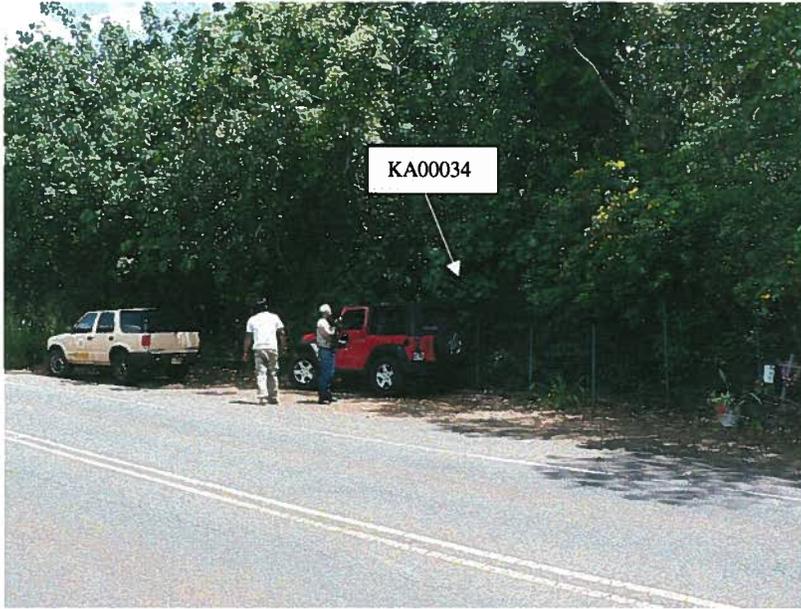


Exhibit B.2 Aerial photo of sign locations, Opaekaa Falls, Wailua River State Park, Kauai



Exhibit B.3 Photos of proposed sign locations, Opaekaa Falls, Wailua River State Park, Kauai



The area near the boundary of the adjacent private parcel and State lands.



EXHIBIT C

DLNR Division: State Parks Island: Oahu Site/State Park: Sacred Falls State Park

Exposure to natural conditions: Falling rocks

Management Signs:

Station OA00004	Area Closed (NACE)
Station OA00005	Area Closed (NACE)
Station OA00006	Area Closed (NACE)

Site Specific Hazard Signs:

Station: OA00007	Danger Falling Rocks (DFRS)
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See attached:

Exhibit C.1	Map of sign locations
Exhibit C.2	Aerial photo and photos of sign locations

Exhibit C.1 Map of sign locations, Sacred Falls State Park, Oahu



Exhibit C.2 Aerial photo of sign locations, Sacred Falls State Park, Oahu



EXHIBIT D

DLNR Division: State Parks Island: Oahu Site/State Park: Summit Trail, Diamond Head State Monument

Exposure to natural conditions: Falling rocks

Entrance Hazard Signs:

Station OA00008	Warning Falling Rocks (WFRE)
Station OA00011	Warning Falling Rocks (WFRE)
Station OA00012	Warning Falling Rocks (WFRE)

Site Specific Hazard Signs:

Station OA00009	Warning Falling Rocks (WFRE)
Station OA00010	Warning Falling Rocks (WFRE)

See attached:

Exhibit D.1	Maps of sign locations
Exhibit D.2, D.3, And D.4	Aerial photo and photos of sign locations

Exhibit D.1 Map of sign locations, Diamond Head State Monument, Oahu

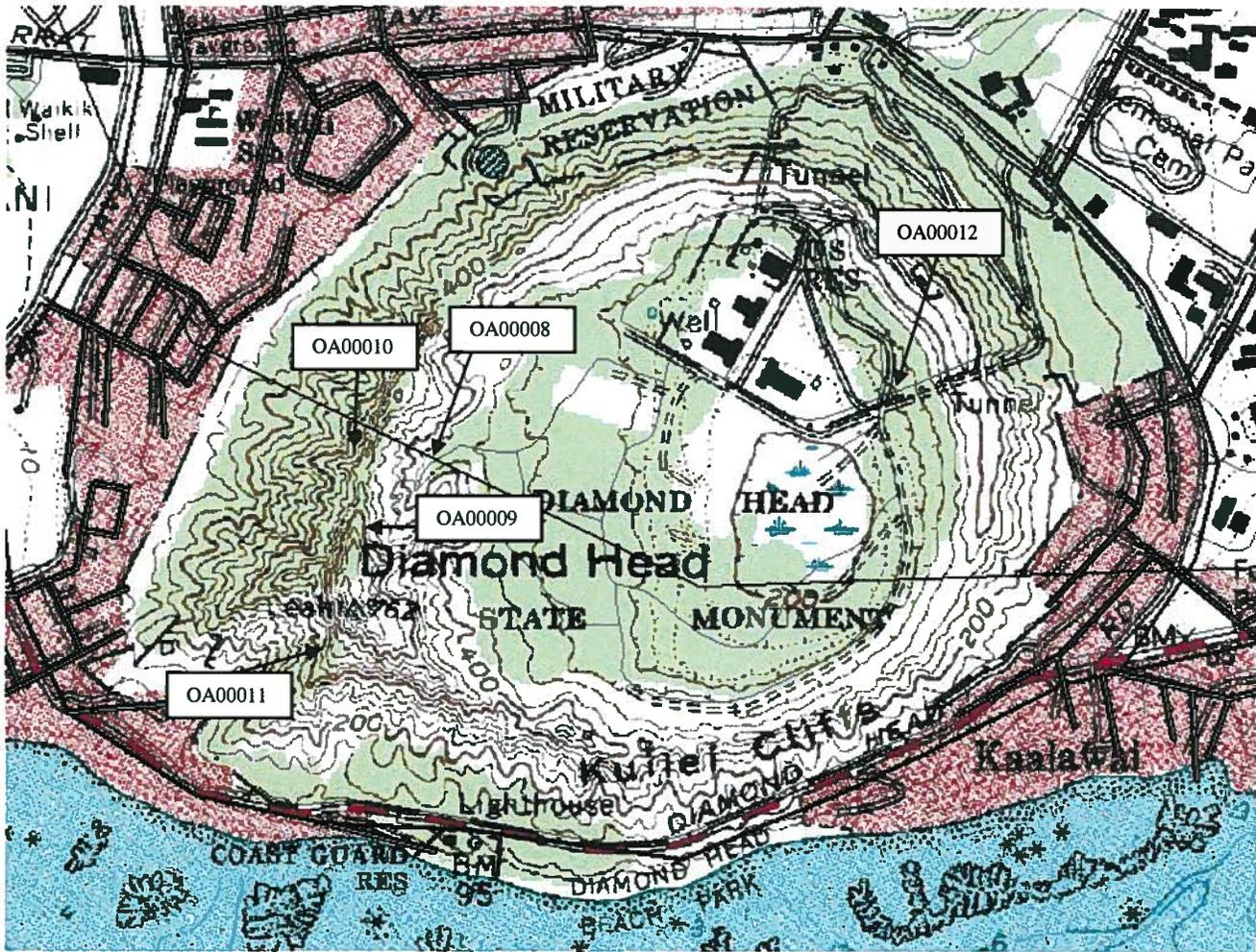


Exhibit D.2 Aerial photo of sign locations of Diamond Head State Monument, Oahu

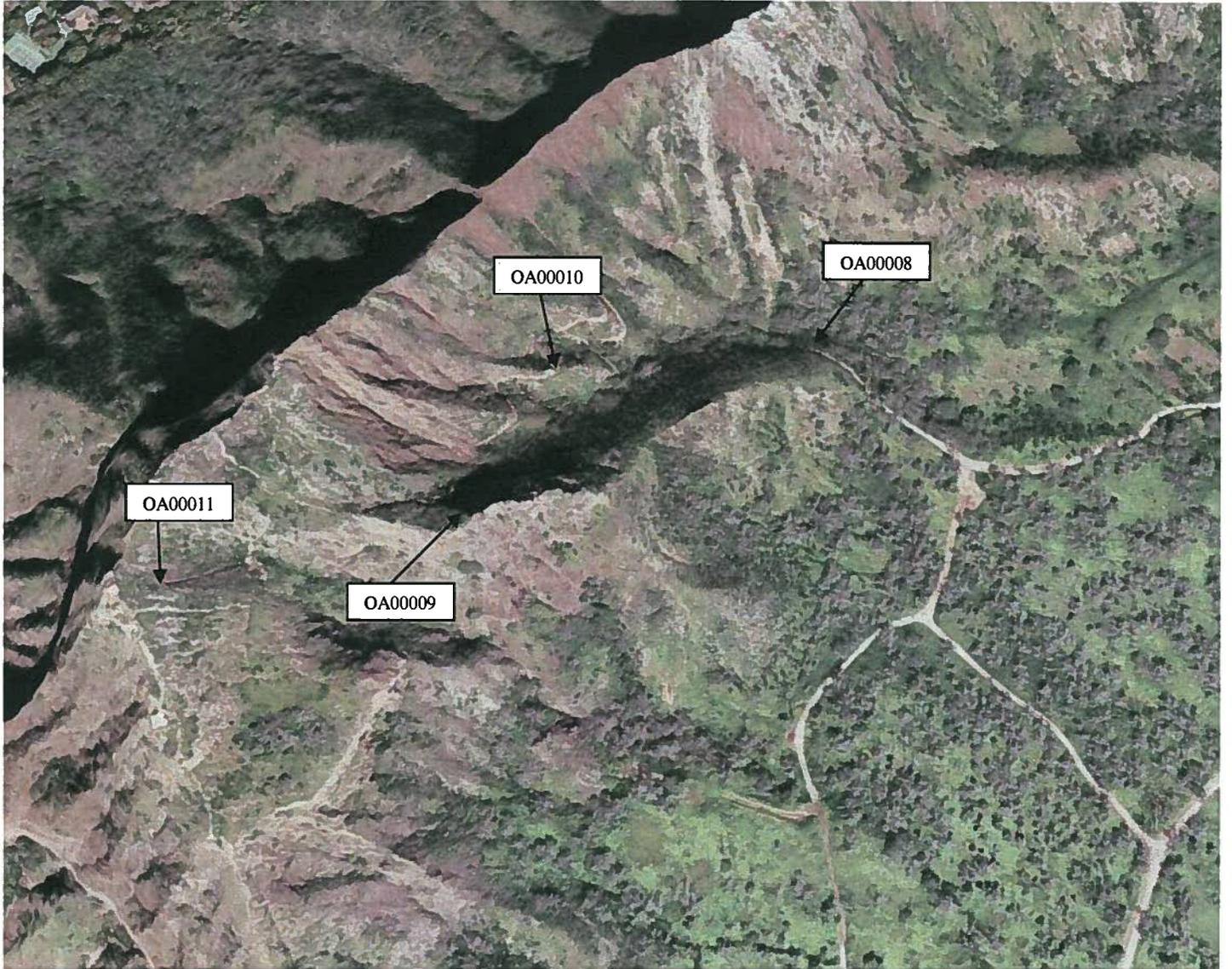


Exhibit D.3 Aerial photo of sign locations the Kahala Tunnel entrance, Diamond Head State Monument, Oahu

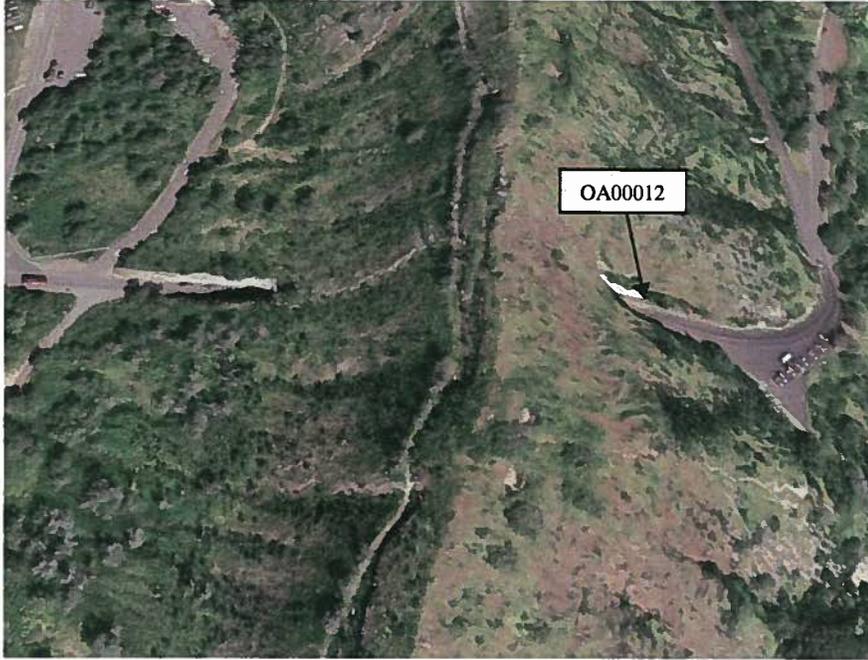
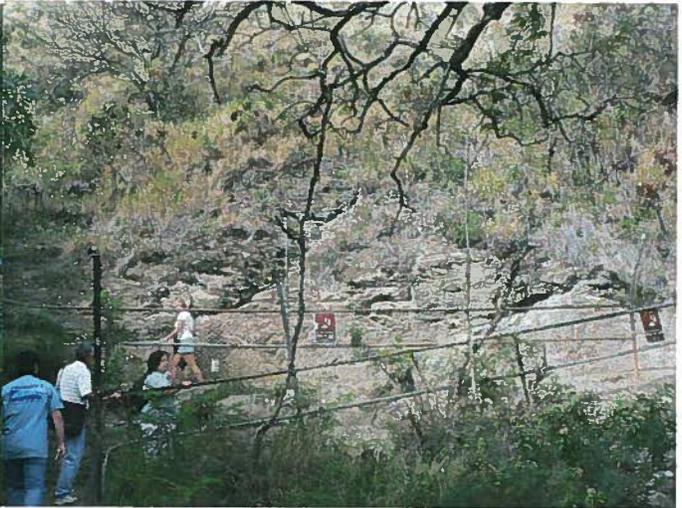


Exhibit D.4 Photos of proposed sign locations, Diamond Head State Monument, Oahu

OA000008



OA000009



OA000010



OA000011



EXHIBIT E

DLNR Division: State Parks Island: Oahu Site/State Park: Nuuanu Pali State Wayside

Exposure to natural conditions: Falling rocks

Entrance Hazard Signs:

Station: OA00012 Danger Falling Rocks (DFRE)

Station: OA00014 Danger Falling Rocks (DFRE)

Site Specific Hazard Signs:

Station: OA00013 Danger Falling Rocks (DFRS)

Station: OA00015 Danger Falling Rocks (DFRS)

See attached:

Exhibit E.1 Map of sign locations

Exhibit E.2 and E.3 Aerial photo and photos of sign locations

Exhibit E.1 Map of sign locations, Nuuanu Pali State Wayside, Oahu

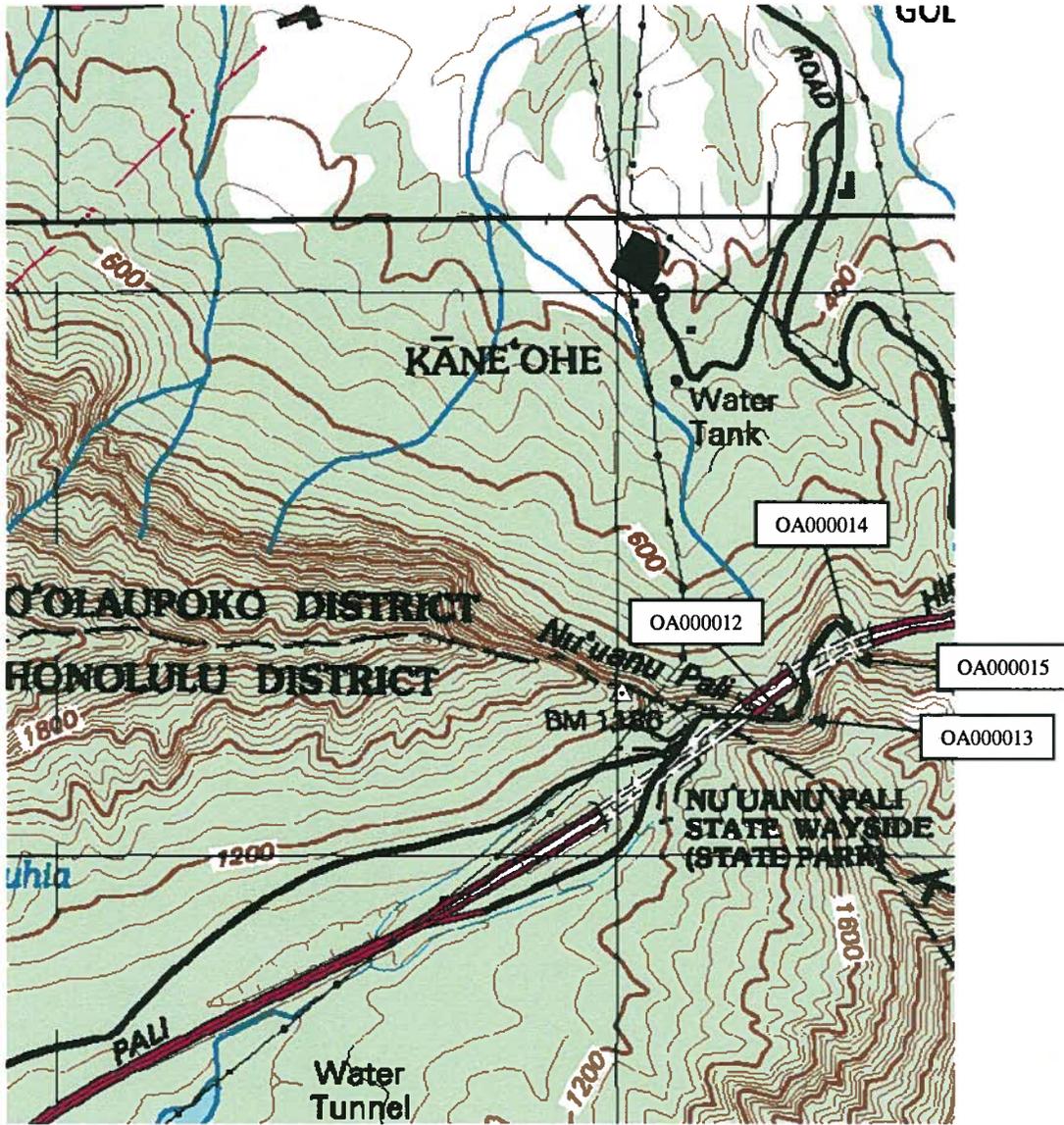


Exhibit E.2 Aerial photo of sign locations, Nuuanu Pali State Wayside, Oahu



Exhibit E.3

Photos of proposed sign locations, Nuuanu Pali State Wayside, Oahu

