

**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCE**  
**OFFICE OF CONSERVATION AND COASTAL LANDS**  
**Honolulu, Hawai'i**

180-Day Exp. Date: June 27, 2018

June 8, 2018

**Board of Land and  
Natural Resources  
State of Hawai'i  
Honolulu, Hawai'i**

REGARDING: Conservation District Use Application (CDUA) HA-3812  
*Infrastructure Improvements at Maunakea Visitor Information Station*

APPLICANT: University of Hawai'i at Hilo

AGENT: Kristin Duin, Sustainable Resources Group Intn'l, Inc. Kailua, Hawai'i

LOCATION: Halepōhaku Mid-level Facilities, Ka'ōhe, Hāmākua, Hawai'i

TMK: (3) 4-4-015:012

AREA OF PARCEL: 19.3 acres

AREA OF USE: approximately 2.0 acres

SUBZONE: Resource

**PROJECT SUMMARY**

The Visitor Information Station (VIS) at the Halepōhaku Mid-level Facilities provides a place for visitors to the summit of Maunakea to acclimate prior to ascending to higher altitudes, and educates visitors on the cultural, scientific and natural resources of the mountain.

The Office of Maunakea Management is proposing improvements to the VIS parking area. The main elements of the project include the relocation of one of the longhouses south of VIS, constructing a new access lane, constructing a new 42 stall paved parking lot with new access lanes, modifications to the existing 24 stall VIS parking lot, installing new walkways, installation of new gates, building a new greenhouse, and adding various drainage improvements. The total project area encompasses approximately two acres.

The project area is in lands that are leased to the University of Hawai'i by the State under General Lease S-5529.

The following exhibits are included with this report:

- Exhibit 1: Existing Conditions at Maunakea VIS
- Exhibit 2: Proposed Improvements at Maunakea VIS
- Exhibit 3: Demolition Plan
- Exhibit 4: Ingress/ Egress Exhibit
- Exhibit 5: Historic Properties in the Halepōhaku Area
- Exhibit 6: Archaeological Survey
- Exhibit 7: Palila Critical Habitat
- Exhibit 8: Best Management Practices
- Exhibit 9: Written Comments and Applicant's Responses
- Exhibit 10: Sign Plan for Halepōhaku (revised)

## **BACKGROUND**

The applicant reports that the project is driven by an increased level of visitors to the summit area, in particular at sunset, and the need to protect visitor safety and to protect the area's natural and cultural resources. A 24-stall paved parking area was constructed in 1983, which is no longer adequate.

OMKM reports that visitor numbers began increasing after improvements were made to the Saddle Road, which opened up the area to more vehicles. Sunset viewing, in particular, has become increasingly popular in recent years. Cars currently park in one of the 24 paved spaces, in nearby dirt parking lots, and along the shoulder of the access road.

When the Stargazing program is held, currently on Tuesday, Wednesday, Friday, and Saturday, a moderately busy night can see approximately 120 visitor vehicles and eight staff vehicles. On extremely busy nights there may be as many as 200 visitor vehicles. These totals include eight to ten commercial vehicles.

In March 2017 the Maunakea Observatories Support Services (MKSS) installed a guardrail to discourage off-road parking and to prevent erosions and deterioration to the road edge. This improved traffic flow in general by forcing all parking onto the Halepōhaku side of the road; however, it also served to increase parking pressure within the Halepōhaku parcel.

The Maunakea Comprehensive Management Plan calls for parking areas to increase as visitor levels increase, and mandates that parking be kept on the same side of the road as Halepōhaku.

With the addition of the proposed VIS Parking Area 2, there would be parking for 64 vehicles in marked stalls in improved lots (VIS Parking Areas 1 & 2). Overflow parking would continue to be directed to VIS Parking Area 3 (capacity of 55 vehicles) and if necessary and if available, the staging area (capacity of 60 vehicles). It is anticipated that overflow parking would be needed on most nights from late spring to late fall and during some holidays (end of year and

spring break). Other times during the year overflow parking would be used mostly on weekends when the weather is good.

## **PROPOSED IMPROVEMENTS**

### Parking Improvements

There are currently three parking areas in the area: a paved lot north of the visitors' center that contains 23 regular stalls and one ADA compliant stall (Parking Area 1), an unimproved gravel lot south of the center and north of two longhouses (Parking Area 2), and a smaller unimproved gravel lot south of the longhouses (Parking Area 3). There is an informal staff parking lot connected to Parking Area 3. Visitors also parked alongside the Mauna Kea Access Road prior to the installation of a guardrail in March 2017.

Under the proposal, Parking Area 1 would be partially repaved and restriped, resulting in 19 regular and three ADA compliant parking spaces. Parking Area 2 will be expanded to 20,600 square feet and be designed to accommodate a total of forty-two vehicles. No changes are being proposed for Parking Area 3.

An existing footpath will be paved to create a walkway between Parking Area 2 and the visitors' center.

### Access Lane

The applicant proposes to construct a new 350-foot long one-way access lane connecting Parking Areas 2 and 1. The lane will include a pull-out that will allow vehicles to drop off passengers at the visitors' center before returning via Maunakea Access Road to the parking areas.

### Longhouse

There are two longhouses south of the VIS which were formerly used as dormitories. The northern longhouse is currently used as office space. It would be removed and relocated outside of the UH Management Area to make room for the expansion of Parking Area 2. The building will be demolished if for some reason it cannot be relocated. The southern longhouse is currently used as a public presentation area and as a storage area; it will remain.

### Drainage

The project will result in an increase in impervious surface areas. To manage runoff the project will install a rip-rapped lined swale with a culvert headwall between the Maunakea Summit Access Road and the new VIS Access lane, gravel islands on the northeast and

southwest sides of Parking Area 2, a rip-rapped swale on the northwest side of Parking Area 2, three drywells in Parking Area 2, and new culverts under the ingress/egress and the sidewalk.

### Gates

The applicant proposes to install one gate between Parking Area 2 and the staff parking lot, and one gate at the egress from Parking Area 1. The first gate will generally be left closed. The second gate will be closed during evening stargazing activities.

### Greenhouse

A free-standing 375 square-foot greenhouse will be installed north of the visitor center, near the mid-level support facilities. It will be anchored to the ground, but will not require a foundation. Electricity will be supplied by solar power. Water will be supplied via a link to the support facilities.

### Natural Resources Protection and Mitigation

Four native bird species have been observed at Halepōhaku: palila (*Loxioides bailleui*), 'amakihi (*Chlorodrepanis virens virens*), 'apapane (*Himatione sanguinea*), and 'i'iwi (*Vestiaria coccinea*). Palila were observed fairly consistently along a transect about a quarter mile to the east of Halepōhaku, up until 1990; since then there have only been intermittent sightings.

The endangered 'ōpe'ape'a (Hawaiian hoary bat, *Lasiurus cinereus semotus*) inhabits similar habitats to those at the project site; however, none have been recorded at Halepōhaku.

The site contains potential foraging habitat for other endangered species, including 'io (Hawaiian hawk, *Buteo solitaries*), 'ua'u (Hawaiian petrel, *Pterodroma sandwichensis*), and pueo (Hawaiian owl, *Asio flammeus sandwichensis*). None of these have been observed at Halepōhaku in recent times. Nēnē (*Branta sandvicensis*) have never been recorded at Halepōhaku, but they do occur at lower elevations on Maunakea and could potentially move into the project site.

The most abundant vegetation in the project area are non-native grasses. However, there are a number of endemic māmane trees (*Sophora chrysophylla*) in the project area. These, in turn, are a critical food source for the endangered palila (*Loxioides bailleui*), which are occasional visitors to the area. It is difficult to get an exact count of the number of affected māmane trees due to multiple stems originating from the underground from one tree. This is thought to be triggered by ungulate grazing. The estimated number of imāmane trees within the project site is between 29 and 44 individuals.



The permittee will plant 130 māmane seedlings once the project is completed, a ratio of 2:1 for every māmane that will be removed during construction. The saplings will be monitored for two years, and if the survival rate is less than 80% then the permittee will replant more saplings.

There are 75 planted specimens of the endangered 'āhinahina (Maunakea silversword, *Argyroxiphium sandwicense* subsp. *sandwicense*) in an enclosure 40 yards west of the project area. There are no 'āhinahina in the project area.

#### Historical Resources Protection and Mitigation

Six surveys, two data recovery efforts, and one monitoring effort have been conducted in the Halepōhaku parcel since 1979. Four historic properties that have been identified on the parcel: a tool quarry and workshop complex known as the Pu'ukalepeamoā Complex and three stone buildings that were part of the Halepōhaku Rest Camp and Comfort Station.

The Pu'ukalepeamoā Complex consists of twelve lithic scatters and two shrines that occur both on the Halepōhaku parcel and in the neighboring forest reserve. A map of the complex is attached as **Exhibit 5**. One of these lithic scatters, a 3229 square-foot area identified as Site 10311, occurs within the project area. The State Historic Preservation Division conducted a guided data recovery in 1993, which yielded 40 artifacts. A survey of the site by Pacific Consulting Services in October 12, 2016 did not turn up new artifacts.

No burials have been uncovered on the parcel, and there are no mention of burials in the recorded oral histories.

#### Timeline

The first phase of construction will involve the installation of sediment and erosion control measures, including silt fences and filter socks. Following this the longhouse, some existing pavement, some riprap, two small masonry walls, and lighting along the footpath will be removed. This will be followed by grubbing and grading in the Parking Area 2 and along the new access lane. Electric equipment, the drainage improvement features, cement posts for new signs and the gates will then be installed.

Paving will commence once all surface areas have been properly prepared. Afterwards the signs and gates will be installed, and any temporary structures removed.

The installation of the greenhouse can occur at any time during the project.

The applicant estimates that the project can be completed within twelve months if the necessary permits can be secured.

## ANALYSIS

On January 2, 2018 the Department notified the applicant that:

1. The project qualifies is as a “moderate alteration” to the Halepōhaku Mid-Level Facilities pursuant to Hawaiʻi Administrative Rules (HAR) §13-5-2 Definitions, *“Moderate alteration” means work done to an existing structure, facility, or use that results in more than ten percent increase, but no more than a fifty percent increase, in the size of the structure, facility, or use.*
2. The proposed use was an identified land use in the Protective subzone of the Conservation District, pursuant to Hawaiʻi Administrative Rules (HAR) §13-5-24, P-8 STRUCTURES AND LAND USES, EXISTING, (C-1), *Moderate alteration of existing structures, facilities, uses, and equipment.*

This use requires a permit from the Chair of the Department of Land and Natural Resources. However, pursuant to §13-5-33 DEPARTMENTAL PERMITS (j), the Chair of the Board of Land and Natural Resources decided that the permit decision should be made by the Board of Land and Natural Resources due to the public interest in development on Mauna Kea. The Board will have the final authority to grant, modify, or deny any permit.

3. A public hearing would be required pursuant to HAR § 13-5-40 *Hearings, (a) Public hearings shall be held on (4) On all applications determined by the chairperson that the scope of the proposed use or the public interest requires a public hearing on the application.*
4. Pursuant to HAR §13-5-31 *Permit applications*, the permit required that an environmental assessment be carried out.

An Environmental Assessment was prepared for the project by Sustainable Resources Group, International, Inc. The University of Hawaiʻi at Hilo was the approving agency; they published a Finding of No Significant Impact (FONSI) on August 7, 2017.

5. Any facilities and projects need to be in compliance with the Maunakea Comprehensive Management Plan approved by the Board of Land and Natural Resources in 2009.

## SUMMARY OF COMMENTS

The Office of Conservation and Coastal Lands referred the application to the following agencies for review and comment: DLNR – Land Division, Historic Preservation, Division of Forestry and Wildlife; County of Hawaiʻi Planning Department; the United States Fish and Wildlife Service, and the Office of Hawaiian Affairs.

A notice of the application was placed in the January 23, 2018 edition of the Office of Environmental Quality Control’s Environmental Notice.

Copies of the application were available for review at the Kailua-Kona Public Library, Thelma Parker Public Library, and the Hilo Public Library. It was also available on OCCL's website.

OCCL held a public hearing on February 28, 2018 at the YWCA in Hilo, with OCCL Administrator Sam Lemmo serving as Hearing Officer. A representative from Sustainable Resources Group International presented a summary of the project, and representatives from the Office of Maunakea Management were available to answer questions. Fourteen members of the public attended.

Written comments were received from the following individuals and agencies:

DLNR Land Division

The property is under the management of DLNR's Land Division and is leased to the University of Hawai'i at Hilo under General Lease No. S-5529 for permanent mid-level facilities, a construction camp, an information station, and existing facilities purposes.

Land Division finds that the proposal is consistent with the lease terms and conditions, and has no objections to the project.

DLNR Division of Forestry and Wildlife (DOFAW)

DOFAW note that 'ōpe'ape'a (Hawaiian hoary bat, *Lasiurus cinereus semotus*) has the potential to occur in the area, and recommends avoiding the use of barbed wire.

Nēnē (*Branta sandvicensis*) may also occur in the area. DOFAW recommends that a qualified biologist survey the area before any land clearing or excavation occurs, and that the surveys should be repeated if activities are delayed by more than three days. Staff should contact DOFAW if a nest is discovered. If a nēnē is present then all activities within 30 meters should cease. Work can continue once the bird has left the area.

DOFAW recommends that any nighttime lighting be fully shielded and downward facing to minimize impacts to seabirds that might be traversing the project area.

DOFAW is supportive of the plans to accommodate the increasing parking demands, though they do have concerns on the flow of traffic. Currently the overflow parking lots below the project area are fed by flowing traffic from above, and the traffic exits at the lower end of the parcel. This area is also the start of the Nā Ala Hele program trail, the Maunakea Access Road (R-1), trailer parking for the Maunakea ATV and Dirt Bike Riding Area, and the entry point to the Maunakea Forest Reserve. These are all managed by DOFAW. On busy evenings, when both the OMKM and the overflow lots are full, Maunakea Forest Reserve users find their vehicles blocked in.

To help manage this, DOFAW recommends that: OMKM post signs in coordination with Nā Ala Hele stating that areas outside OMKM properties are only for ATV and dirt bike users of the Maunakea Access Road; that OMKM rangers and parking management staff notify DOCARE of any illegal activities that are observed in the forest reserve, such as commercial

activities, parking in the ATV area, etc.; and that OMKM revise the traffic flow plan so vehicles are not exiting through the bottom of the parcel.

#### Applicant's response

Barbed wire will not be used.

Surveys for endangered birds will be done prior to any ground disturbing activities. Although nēnē have not been recorded at Halepōhaku, they will be added to the list of birds that are surveyed for. OMKM will contact DOFAW if a nest is found.

OMKM and Maunakea Support Services (MKSS) have been working with DOFAW and Nā Ala Hele to address on-going parking concerns. A joint meeting was held on site on April 5, 2018 to discuss visitor use and parking patterns. It was concluded that the traffic flow pattern will remain as proposed.

OMKM, after consulting with DOFAW, has amended its proposed signage plan. This is to this report as Exhibit 10.

The applicant notes that OMKM rangers regularly communicate with DOCARE and Hawai'i County Police regarding compliance and violation concerns.

OMKM had previously sought a Site Plan Approval for a gate at the lower end of the parcel. DLNR did not issue the permit, preferring that it be included in the pending review and update of the Maunakea Comprehensive Management Plan. The applicant believes that a one-way traffic pattern, with vehicles exiting through R-1, is the safest option for this area. Once the parking lot improvements are completed, OMKM and MKSS will work to eliminate traffic exiting through R-1.

#### United States Department of the Interior, Fish and Wildlife Service

The Service finds that five listed animal species and one plant species may occur in the project area: 'ōpe'ape'a, palila (*Loxoides bailleui*), 'ua'u (Hawaiian petrel, *Pterodroma sandwichensis*), 'akē'akē (band-rumped storm petrel, *Oceanodroma castro*), 'a'o (Newell's shearwater, *Puffinus newelli*), and a 'āhinahina species endemic to Hawai'i island (Mauna Kea silversword, *Argyroxiphium sandwicense* subsp. *sandwicense*).

To minimize impacts to 'ōpe'ape'a, the Service recommends that plants greater than fifteen feet tall are not disturbed during bat birthing and pup rearing season, June 1 through September 15.

To minimize impacts to palila the Service recommends that construction activities be avoided during nesting season (February through July). If this is not possible, the Service recommends that a nest survey be conducted no more than 14 days before the start of any vegetation clearing, to include all areas within 500 feet of the construction zone.

To minimize impacts to the seabirds, which might traverse the area during the breeding season (March 1 through December 15), the Service recommends that outdoor lights be fully

shielded so that the bulb can only be seen from below, that automatic motion sensors be installed to turn off outdoor lights when human activity is not occurring in the area, and that nighttime construction be avoided during the seabird fledging period from September 15 through December 15.

To minimize collisions, fences that extend above the vegetation line should integrate three strands of polytape into the fence line to increase visibility. Powerlines, guywires, and other cables should be kept to a minimum.

Impacts to silverswords can be minimized by placing temporary fencing or other barriers around the footprint of the project. As the current silversword enclosure is less than 200 feet from the project boundaries it is important that all activities remain in the project's footprint.

The Service also recommended a series of biosecurity protocols for preventing the movement or introduction of invasive species. These include pressure washing all vehicles, visual inspections of all vehicles, specific monitoring techniques for invasive ants, and keeping project vehicles and equipment in pest-free areas when stored off-site. Their complete set of recommendations are included with the exhibits to this report.

#### Applicant's response

An on-going project to document habitat use of native birds and bats has not documented breeding or nesting in the project vicinity. No palila or bat breeding or nesting has been observed in the past thirty years.

As construction is planned to occur during the breeding and nesting season, surveys will be conducted prior to all ground disturbing activities. The USFWS will be contacted if endangered species are present, and no tree removal will occur until the species has left of its own accord.

The project does not include the installation of any fencing.

The applicant acknowledges the potential negative impacts of artificial lighting. One of the proposed best management practices is that *New lighting installed will be the minimum amount for safety and will be placed low to the ground. Lighting will be shielded and red to minimize impacts to wildlife and stargazing.*

The current construction contract prohibits the use of any additional temporary night-time lighting, including security or safety lighting. If it becomes necessary to amend the construction contract to accommodate for some night work, none would occur during the fledging season (September 15 through December 15).

The project does not include the installation of any fences, above ground powerlines, guywires, or other cables that would potentially result in seabird collisions.

The only Maunakea silversword plants in the vicinity are within the clearly marked enclosure on DLNR lands to the east, which is outside of the project site. The boundaries of the project

site would also be clearly marked. Construction activities are not expected to impact the Maunakea silversword plants.

All applicable prevention strategies detailed in the *Maunakea Invasive Species Management Plan* and BMPs listed in Section 5 of the CDUA would be followed. This includes off-site inspections (below the Saddle Road junction) of large deliveries and equipment for the presence of invasive invertebrates. OMKM routinely surveys for and removes invasive species, should any be inadvertently missed.

#### Office of Hawaiian Affairs (OHA)

OHA is concerned that the project may negatively impact cultural resources that exist in the project area, and requests that additional information be provided prior to the public hearing<sup>1</sup>. They note that there is a known lithic scatter (Site 10311) within the project footprint. OHA is unclear if the site has been delineated, or if consultation pursuant to HAR Chapter 13-275 was conducted. OHA thus questions whether the project could impact subsurface features and / or artifacts in Site 10311 that were not identified in a 1993 data recovery or a 2016 pedestrian survey.

OHA also notes that a qualified archaeologist will monitor all ground disturbing activities and that all procedures identified in the Historic Property Monitoring Plan for UH Management Areas on Maunakea will be followed. OHA is unclear if the Monitoring Plan includes stipulations for construction monitoring, and recommends that the applicant clarify how they define 'qualified archaeologist.' OHA requests that the applicant make the plan available for review.

OHA also requests more information regarding the cultural resources training that personnel are required to attend.

OHA recommends that the application disclose whether construction monitors will have the authority to remove personal from the project site, or to halt the project.

Finally, OHA seeks confirmation from the State Historic Preservation Division (SHPD) that no historic properties will be threatened by the project, as SHPD is unclear whether their determination of November 2016 applied only to the graded area or to the entire project.

#### Applicant's response

OMKM engaged in additional consultation with SHPD in March and May of 2018. During this additional consultation SHPD upheld the determination of "no historic properties affected", but agrees that a project-specific archaeological monitoring plan is warranted in the event of an inadvertent discovery.

A project-specific archaeological monitoring plan has been developed and is currently under review by SHPD. The plan details protocols for monitoring and inadvertent discoveries. The

---

<sup>1</sup> OCCL notes that OHA submitted their testimony two days after the public hearing.

plan includes information on previously recorded sites (10310 and 10311) within the project areas. Work would not commence until the plan has been approved by SHPD.

An independent qualified archaeologist would be retained to monitor all ground disturbing activities for historic features such as artifact concentrations.

The lithic artifacts identified in 2016 are not located within the project site, and no activities related to construction would occur in the areas where they are located. However, the on-site archaeologist would be informed of their existence and location. A request for a determination about whether these artifacts are believed to be a part of the Pu'ukalepeamoia Complex should be directed to SHPD.

The Archaeology Branch of SHPD maintains an annually updated list of State of Hawai'i permitted archaeological firms. Permitted firms may be contracted to provide archaeological services for private individuals and public agencies. The monitoring program will be directed by a principal investigator qualified to conduct archaeological research in Hawai'i pursuant to HAR §13-281-3.

The on-site construction monitor shall have the authority to order that any or all construction activity cease if and when, in the construction monitor's judgment, (a) there has been a violation of the terms or conditions of the CDUP that warrants cessation of construction activities, or (b) that continued construction activity will unduly harm natural or cultural resources; provided that the construction monitor's order to cease construction activities shall be for a period not to exceed seventy-two hours for each incident. All orders to cease construction issued by the construction monitor shall be immediately reported to the Chairperson of BLNR and the OMKM.

The Chairperson may issue a cease and desist order to extend the period of time that construction activity is prohibited, or such other order as the Chairperson deems appropriate.

The cultural and natural resources orientation was developed in consultation with and reviewed by Kahu Kū Manu. The orientation is public, available online and in-person, and includes a feedback opportunity for all participants. According to OMKM records, OHA staff have indicated their attendance at the orientation.

The orientation can be viewed online at:

[docs.google.com/forms/d/e/1FAIpQLScywYvg59LmeeuiYoj72zgwZAniYldHbZB23oXRyWz8cCQAw/viewform](https://docs.google.com/forms/d/e/1FAIpQLScywYvg59LmeeuiYoj72zgwZAniYldHbZB23oXRyWz8cCQAw/viewform)

### Terrence Noda

Mr. Noda is a local resident and, as a hunter and hiker, a frequent user of the Halepōhaku parking area. He has noticed an increase in vehicle and pedestrian traffic in the past years, particularly in the evening. He has been blocked in by overflow traffic, and has waited for up to twenty minutes for vehicles to clear the egress to the road. In addition, the road from

Saddle Road to Halepōhaku is increasingly unsafe the increase in drivers who are not used to the conditions on the mountain. He finds the current situation untenable.

However, he notes that the proposal to increase the space for parking to fifty stalls won't meet current needs, and questions why money will be spent on a proposal that is already outdated. He is not opposed to the project, but would like to see money spent on mitigating the impacts of tourism on other users of the area.

#### *Applicant's response*

OMKM acknowledges that the proposed project will not meet the entire current parking need, but the project was limited by available funds.

OMKM is working with DOFAW and Na Ala Hele to ensure adequate ATV/Motorcycle parking is available and to plan additional signage in the lower parking areas. In addition, once the parking lot improvements are completed, OMKM and MKSS will work to eliminate traffic exiting through R-1. Additionally, the Maunakea Administrative Rules, expected to be effective in 2019, will help manage the number of tour operators to ensure sustainable use of the area.

#### Page Else

Ms. Else strongly supports the proposed improvements. She has witnessed unsafe conditions such as the inability to separate pedestrian from vehicle traffic, pedestrian and vehicle chokepoints, speeding in the parking lot, and high amounts of blinding dust during windy periods.

#### *Applicant's response*

The applicant thanks Ms. Else for her supportive comments. The proposed improvements are intended to address some of the existing safety concerns. Additionally, the Maunakea Administrative Rules, expected to be effective in 2019, will help manage the number of tour operators to ensure sustainable use of the area.

#### Public Hearing

Four members of the public gave testimony at the public hearing.

#### Deborah Ward (Sierra Club)

Ms. Ward noted that many of the concerns of the Sierra Club were addressed.

She noted that a two-year old māmane is still a small tree, and requested that a longer monitoring period be considered.



Ms. Ward also noted that the restrooms were closed during previous demonstrations on Maunakea, and was concerned about OMKM's commitment to maintaining appropriate sanitation facilities. She is appreciative that the permittee reports that the facilities remain open at night.

Ms. Ward also asked for clarification on how cross-traffic would be handled at VIS-1 and the access lane.

#### Cory Harden

Ms. Harden shared many of Ms. Ward's concerns. She has additional concerns about continued University management, and questions why the improvements are needed in light of the governor's promise to reduce tourism on the summit.

She is concerned about the impact of māmane tree removal on bats and birds.

Ms. Harden also noted that there is housing for construction workers being proposed, and asks whether this should have been included in this plan.

Ms. Harden also requested clarification on how the project will impact historic sites and current cultural practices.

#### James Stagg (tour guide)

Mr. Stagg has concerns regarding public access to the restrooms. He notes that there are currently two portable restrooms near the VIS, and two portables near the lower parking area. Mr. Stagg is concerned that the two lower portables will be removed under this proposal. He also notes that he has observed visitors using the bush rather than walking to the lower portables.

Mr. Stagg also requested clarification on whether the VIS restrooms would be open at night, and on when the gates would be open and closed. He stated that more tourists have become interested in sunrise tours as an alternative to sunset tours, and that there might be three companies with fifty visitors total on site at 3 a.m. on any given morning.

#### Armand Coleman

Mr. Coleman asked about the history of "parking lot 3." He notes that this current plan still might not need current needs on busy nights, and stated that improving a third parking area would allow for ample parking should visitors to the summit continue to increase.

Mr. Coleman also stated that painting arrows on asphalt is an effective method for managing traffic flow.

### Applicant's response to public hearing comments

Regarding māmane: The māmane saplings are anticipated to be one to two feet tall after two years. The most likely cause of mortality at this point would be trampling. Landscape scale disease or mortality events, such as the insect-related leaf curl concerns identified in 2014, are also documented in annual natural resource reports and are not a project specific topic.

Based on other out-planting activities and restoration programs on Maunakea, the applicant believes that a two-year monitoring period is sufficient to establish success (to the 80% threshold) of māmane. Long-term monitoring of these and other out-plantings will occur as part of OMKM's established natural resources management program. OMKM would prefer to tie future success to its overall natural resources management program, which already includes monitoring and reporting, rather than monitoring specific plants on a project-by-project basis for extended time periods.

Regarding restrooms: The VIS is open every day until 10 p.m. The VIS opening time is dependent upon staff availability and funding. Currently the VIS opens at 12:00 p.m., but the program goal is to open at 9 a.m. When the VIS is closed, the facility is locked and secured, including the VIS restrooms.

Four portable restrooms are available for visitors to the Halepōhaku area, two lua directly behind the VIS and two adjacent to the lower level longhouse. These portable restrooms are open 24 hours a day and are maintained by Maunakea Support Services (MKSS). All four lua would remain open 24 hours a day during construction. The two lua near the longhouse would not be removed but could be relocated if blocked by construction. OMKM and MKSS would ensure that all four portable restrooms remain near parking areas and accessible to the public during construction activities.

Regarding capacity: OMKM acknowledges that the proposed project will not meet the entire current parking needs. This project was limited by available funds. Future plans for permanent parking will be influenced by upcoming new land authorizations; a desire to not harden more surface area than required; and identified demand.

The Maunakea Administrative Rules, expected to be effective in 2019, will help manage the number of tour operators to ensure sustainable use of the area.

Regarding housing: Housing for construction workers is not part of this proposal.

Regarding cross-traffic: An updated signage plan will handle traffic flow with a combination of stop and do-not-enter signs.

The written comments and applicant's responses are attached to this report as **Exhibit 9**.

## HAWAI'I ADMINISTRATIVE RULES (HAR) §13-5-30 CRITERIA

The following discussion evaluates the merits of the proposed land use by applying the criteria established in HAR §13-5-30.

1) *The proposed use is consistent with the purpose of the Conservation District.*

The objective of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.

The project is designed to better manage parking at the Halepōhaku Mid-level Facilities. The increase in vehicle traffic is a potential public safety hazard, and is negatively impacting both visitors who use the site for star gazing as well as users of nearby forestry lands. In addition, the amount of off-site parking has the potential to negatively impact the areas natural and cultural resources.

Moving parking to designated areas, and separating pedestrian and vehicle traffic, will provide safer options for visitors to the site. The increase in official parking areas will reduce the impacts of off-road parking.

2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

The objective of the Resource Subzone, pursuant to Hawai'i Administrative Rules (HAR) §3-5-13, is *to develop, with proper management, areas to ensure sustained use of the natural resources of those areas.*

The proposed use is an identified land use in this subzone pursuant to §13-5-24, P-8 STRUCTURES AND LAND USES, EXISTING, (C-1), *Moderate alteration of existing structures, facilities, uses, and equipment.*

The Board of Land and Natural Resources approved a Comprehensive Management Plan (CMP) for University-managed lands on Maunakea on April 9, 2009. The CMP included management actions of previous management documents, including the 1995 Management Plan for UH Management Areas and the 2000 Mauna Kea Master Plan. All land uses and activities that take place within UH managed areas will be evaluated according to these plans and processes, subject to future modifications based on an adaptive management framework.

The Maunakea CMP contained 103 management actions and associated reporting requirements that would govern the future of Maunakea. A condition of BLNR approval was that the University develop a *Project Development and Management Framework* and four resource sub-plans *Natural Resources Management Plan; Cultural Resource Management Plan; Public Access Plan; and Decommissioning Plan*. The Resource subplans were approved by BLNR on March 25, 2010.

The current proposal would take the following actions to comply with the conditions of the CMP:

Maunakea User Orientation: All personnel will be required to attend the mandatory Maunakea User Orientation sessions, which cover the natural and cultural resources of the mountain, as well as the safety protocols for working on the mountain. Personnel who do not comply with the principles established in the orientation will be required to leave the project site.

Best Management Practices: The Best Management Practices for the project are a combination of the general practices outlined in the CMP, including both construction and preconstruction activities, as well as practices associated with the National Pollutant Discharge Elimination System, building, and grading permits.

The complete set of proposed Best Management Practices is attached to this report as **Exhibit X+3**. These cover such issues as invasive species prevention and control, materials storage, waste management, hazardous materials management, erosion, water, and air quality, and cultural and natural resource protection.

All materials for the project would be stored either within the proposed project site or in the existing construction staging area.

Rock Movement Plan: OMKM will require the contractor to develop a Rock Movement Plan to minimize potential adverse impacts to cultural resources and the invertebrate environment. This plan will detail excavation, grading activities, and materials storage.

Invasive Species Plan: All activities will need to be in compliance with the Maunakea Invasive Species Management Plan. The plan details specific procedures for cleaning and inspecting vehicles, machinery, and materials; maintaining the construction area; general monitoring and control; and waste removal. A trained biologist will oversee the inspection of vehicles and materials. These inspections will take place below the Saddle Road junction.

Monitoring: An on-site construction monitor will be present to ensure that the terms and conditions of the Conservation District Use Permit (CDUP) are followed. The monitor will have the authority to halt construction if there is a violation of the conditions, or if it appears that construction will unduly harm burials, or historical, natural, or cultural resources. In addition, an archaeological monitor will be present for all ground-disturbing work.

OMKM submitted an updated project-specific archaeological monitoring plan to SHPD on May 10, 2018.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

The goals of the CZM program are to address issues from an integrated ecosystem perspective. No lands in Hawai'i are more than 30 miles from the shore, and mauka land uses have the potential to have secondary impacts in the coastal zone.

Many of the objectives of the CZM program outlined in HRS 205A – protection of historic resources, scenic and open space resources, and recreational resources – parallel the objectives of the Conservation District.

There are additional 205 A objectives specific to coastal ecosystems, and the impact of upland areas on coastal ecosystems. These are *to promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

There are no surface water features in the project area. Mean annual rainfall at the site is 25.3 inches. There are two existing drainage channels in the project area that capture runoff from the Access Road and VIS Parking Area 1. Runoff is directed offsite, where it flows into ephemeral channels. Runoff does not appear to be carried to the ocean due to infiltration along the channels between 9000 and 6500 ft elevations.

The project will increase the amount of impermeable surfaces at the site from 0.42 acres to 0.72 acres. As part of the project the earthen drainages will be stabilized to minimize erosion. Three drywells will be installed so that runoff will be discharged into wells. Gravel islands and a new swale will also help to control any increase in runoff.

There are no anticipated impacts on groundwater due to the low annual rainfall and the proposed drainage improvements. OCCL believes that the proposal is consistent with the guidelines and objectives contained in HRS 205A.

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

The most significant natural resource in the area are the māmane trees, which provide critical habitat for the endangered palila bird.

The applicant proposes to replant māmane at a ratio of 2:1 for every tree that is removed, and to monitor them for two years. More saplings will be replanted if the survival rate drops below 80%.

All trees will be surveyed for bats prior to removal. If one is detected the tree will not be removed until the bat has left of its own accord.

A qualified biologist will survey the area for nesting hawks and palila prior to vegetation being removed. If a nest is discovered within 300 feet of the construction area then the applicant will initiate discussions with US Fish and Wildlife Service personnel.

Work will also be suspended if nēnē appear within 100 feet of any ongoing work.

Any lighting that is installed will be shielded and red to minimize impacts to birds that might transverse the area after dark.

The most significant threat to the area's natural resources is the potential for the introduction of invasive species during construction. The best management practices outlined in the *Maunakea Invasive Species Management Plan* of 2015 will need to be strictly adhered to minimize this risk.

OCCL finds that, if best management practices are followed, the project will not cause significant impact to the area's natural resources.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The improvements were designed to be compliant with the 2000 Master Plan, which provides design guidelines to maintain the visual aesthetics of the Halepōhaku parcel.

The parcel was leased from the State with the intention of locating the mid-level facilities there. The proposed parking improvements are designed to support the Visitor Information Station by improving access that is safer for visitors and less damaging to the environment than the current system of ad hoc parking and ill-defined foot paths.

The design was based upon the location of the existing facilities. The paved parking and walkways are all within the developed area of the parcel. Existing drainage features will be utilized to keep new grading to a minimum.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The greenhouse is the only new structure that is being proposed, while one long house is being removed. The proposal should not have a significant impact on the amount of open space at the parcel.

There will be an increase in impermeable areas. However, OCCL sees the benefit of creating dedicated parking spaces, as the current system of ad hoc and off-road parking is potentially damaging to the environment.

The applicant will plant 130 māmane trees to replace the ones that will be removed as part of the project. These flowering trees can grow up to fifty feet tall in a montane environment, and OCCL recognizes that this will improve on the natural beauty of the site. We also note that māmane are slow growing. The trees can flower after two to

five years; however, we have been unable to confirm how long they will take to reach their full height.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed project does not involve subdivision of Conservation District land.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

The proposed action is proposed as a health and safety initiative. The current level of vehicles on site is overwhelming the existing infrastructure. Managing ingress and egress will help with traffic flow. Creating dedicated pedestrian pathways will make the visitor experience safer.

During construction, actions would be taken to ensure public safety and welfare. Regular traffic flow along the Maunakea Summit Access Road would be maintained. Temporary signage would be placed on the Maunakea Summit Access Road to alert drivers to any road work ahead. Construction equipment would only be parked within the road right-of-way during actual working hours and would not obstruct the normal movement and sight distance of driving motorists. During construction, temporary barricades and directional signs would be used to direct visitors to open parking areas.

#### **KA PA'AKAI ANALYSIS**

In *Ka Pa'akai O Ka 'Āina v. Land Use Commission*, 94 Haw. 31 (2000), hereafter, "Ka Pa'akai," the Hawai'i Supreme Court laid out a framework for assessing cultural impacts. An assessment must include:

- (1) the identity and scope of "valued cultural, historic, or natural resources" in the area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
- (2) the extent to which those resources – including traditional and customary native Hawaiian rights – will be affected or impaired by the proposed action; and
- (3) the feasible action, if any, to be taken by the (agency) to reasonably protect native Hawaiian rights if they are found to exist.

The project area is primarily used as a parking area for users of the VIS as well as hunters, hikers, and ATV and dirt bike users in the neighboring forest reserve. OCCL anticipates that there will be some disruption during the construction phase of the project, but that the result will be an improvement for all users.

There is a contemporary ahu within the DLNR-managed silversword enclosure. Noise during construction might disturb cultural practices there. The applicant states that requests by cultural practitioners for quiet periods can be made directly to OMKM, or by inquiring at the VIS.

Practitioners collect ko'oko'olau and māmane in the area for medicinal and cultural uses, however, collections rarely, if ever, occur within the area immediately surrounding the facilities at Halepōhaku. Subsistence hunting and gathering are not practiced within the Halepōhaku parcel. Most cultural activities within the UH Management Areas take place during daylight hours, with a few occurring at night or in the early morning hours.

Gathering, hunting, and walking occur on nearby DLNR-managed lands, and parking, ingress, and egress for these users has been negatively impacted by the crowds at sunset times. The applicant was worked with DOFAW staff to develop a signage plan that aims to help alleviate these issues.

OCCL recognizes that Maunakea is a culturally significant area, and that any construction on the mountain can raise public concerns. OCCL feels that the applicant has been sensitive to these concerns in developing the project, and concludes that the project will not hinder traditional native Hawaiian cultural practices or resources.

## **DISCUSSION**

OCCL recognizes the critical need to better manage the number of vehicles and users at the VIS, particularly during sunset hours and increasingly during sunrise.

In November 2016 the State Historic Preservation Division determined that no historic properties would be affected by the project with the implementation of the SHPD-accepted archaeological monitoring plan.

A project-specific archaeological monitoring plan has been developed and is currently under review by SHPD. The plan details protocols for monitoring and inadvertent discoveries. The plan includes information on previously recorded sites (10310 and 10311) within the project areas.

OCCL recommends that the Board make a condition of any permit granted by that: Work would not commence until the project-specific archaeological monitoring plan has been approved by SHPD.

The State Division of Forestry and Wildlife and the US Fish and Wildlife Service have made recommendations that OCCL will recommend that the Board make a part of any permit that is issued:

- That a nest survey for endangered species should be conducted no more than 14 days before the start of any vegetation clearing;



- That New lighting installed will be the minimum amount for safety and will be placed low to the ground. Lighting will be shielded and red to minimize impacts to wildlife and stargazing
- That a qualified biologist survey the area for nēnē prior to any land clearing or excavation;
- That surveys for endangered bird and bat species be conducted prior to any ground disturbing activities, and the USFWS be contacted if endangered species are encountered;
- That DOFAW be contacted should a nēnē nest be found; and
- That construction be halted if endangered species are present, and not continued until the species has left of its own volition.

The Office of Hawaiian Affairs requested clarification on the authority that the on-site construction monitors would have. The applicant responded that the monitors could order that all construction activity cease when they determine that (a) there has been a violation of the terms or conditions of the CDUP that warrants cessation of construction activities, or (b) that continued construction activity will unduly harm natural or cultural resources.

The cease-work order cannot exceed seventy-two hours for each incident, and all orders to cease construction issued by the construction monitor shall be immediately reported to the Chairperson of BLNR and the OMKM.

The applicant also noted that the Chairperson may issue a cease and desist order to extend the period of time that construction activity is prohibited, or such other order as the Chairperson deems appropriate.

OCCL will recommend that the Board make these conditions of any permit that is issued.

OCCL finds that the applicant has been responsive to community concerns. Changes that have been made in response to public comments include reducing the number of gates to be installed, not relocating the cabin to VIS Parking 1, promising to continue to plant māmane if an 80% survival rate is not achieved within two years, updating the proposed signage plan to address DOFAW concerns, modifying the ration of accessible vs regular parking spaces, and ensuring that all four portable restrooms will remain open and accessible during construction.

There are concerns that the current proposal will still not provide enough dedicated parking areas on many nights. OCCL understands that a larger plan was considered, but that OMKM lacked the funding to implement it.

The project has provided the department with a list of best management practices that will be followed. These cover invasive species prevention and control, materials storage, waste management, hazardous materials management, erosion, water, and air quality, and cultural and natural resource protection. These practices, attached as **Exhibit 8**, are in addition to those mandated in the *Maunakea Comprehensive Management Plan* and the *Maunakea Invasive Species Control Plan*.

OCCL finds that the concerns raised by the community by other agencies have been adequately addressed. Provided that proper BMPs are followed, OCCL has concludes that the project will not have a significant negative impact on the natural and cultural environment.

As discussed above, the proposal meets the conservation criteria outlined in HAR §13-5-30.

#### **RECOMMENDATION**

Based on the preceding analysis, Staff recommends that the Board of Land and Natural Resources APPROVE this application for infrastructure improvements at Maunakea Visitor Information Station (VIS) at the Hale Pōhaku Mid-level Facilities, Ka'ōhe, Hāmākua, Hawai'i, TMK (3) 4-4-015:012, subject to the following conditions:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;
2. The permittee shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
3. The permittee shall comply with all applicable department of health administrative rules;
4. The permittee shall provide documentation (e.g., book and page or document number) that the permit approval has been placed in recordable form as a part of the deed instrument, prior to submission for approval of subsequent construction plans;
5. Before proceeding with any work authorized by the department or the board, the permittee shall submit four copies of the construction plans and specifications to the chairperson or an authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to the permittee. Plan approval by the chairperson does not constitute approval required from other agencies;
6. Unless otherwise authorized, any work or construction to be done on the land shall be initiated within one year of the approval of such use, in accordance with construction plans that have been signed by the chairperson, and shall be completed within three years of the approval of such use. The permittee shall notify the department in writing when construction activity is initiated and when it is completed;
7. All representations relative to mitigation set forth in the accepted environmental assessment or impact statement for the proposed use are incorporated as conditions of the permit;
8. All best managed practices discussed in the application are incorporated as conditions of the permit;
9. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;

10. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
11. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and the county department of water supply;
12. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
13. Obstruction of public roads, trails, lateral shoreline access, and pathways shall be avoided or minimized. If obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;
14. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;
15. Cleared areas shall be revegetated, in accordance with landscaping guidelines provided in this chapter, within thirty days unless otherwise provided for in a plan on file with and approved by the department;
16. Use of the area shall conform with the program of appropriate soil and water conservation district or plan approved by and on file with the department, where applicable;
17. The permittee shall obtain a county building or grading permit or both for the use prior to final construction plan approval by the department;
18. For all landscaped areas, landscaping and irrigation shall be contained and maintained within the property;
19. Where applicable, provisions for protection of beaches and the primary coastal dune shall be established by the permittee, to the satisfaction of the department, including but not limited to avoidance, relocation, or other best management practices;
20. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law;
21. Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact HPD (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary;
22. The project will comply with any terms and conditions outlined in the Comprehensive Management Plan and associated Resource Sub Plans;

23. The following conditions relating to mitigating impacts to native bird and bats species will be followed:
- a. That a nest survey for endangered species should be conducted no more than 14 days before the start of any vegetation clearing;
  - b. That New lighting installed will be the minimum amount for safety and will be placed low to the ground. Lighting will be shielded and red to minimize impacts to wildlife and stargazing
  - c. That a qualified biologist survey the area for nēnē prior to any land clearing or excavation;
  - d. That surveys for endangered bird and bat species be conducted prior to any ground disturbing activities, and the USFWS be contacted if endangered species are encountered;
  - e. That DOFAW be contacted should a nēnē nest be found; and
  - f. That construction be halted if endangered species are present, and not continued until the species has left of its own volition.
24. Work will not commence until the project-specific archaeological monitoring plan has been approved by State Historic Preservation Division;
25. On-site construction monitors will have the authority to order that all construction activity cease for up to seventy-two hours when they determine that (a) there has been a violation of the terms or conditions of the CDUP that warrants cessation of construction activities, or (b) that continued construction activity will unduly harm natural or cultural resources;
26. The Chairperson of the Board of Land and Natural Resources may issue a cease and desist order to extend the period of time that construction activity is prohibited, or such other order as the Chairperson deems appropriate.
27. Other terms and conditions as prescribed by the chairperson; and
28. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

Respectfully submitted,



Michael Cain, Staff Planner  
Office of Conservation and Coastal Lands

Approved for submittal:



Suzanne D. Case, Chairperson  
Board of Land and Natural Resources



Figure 2. Maunakea VIS Existing Conditions

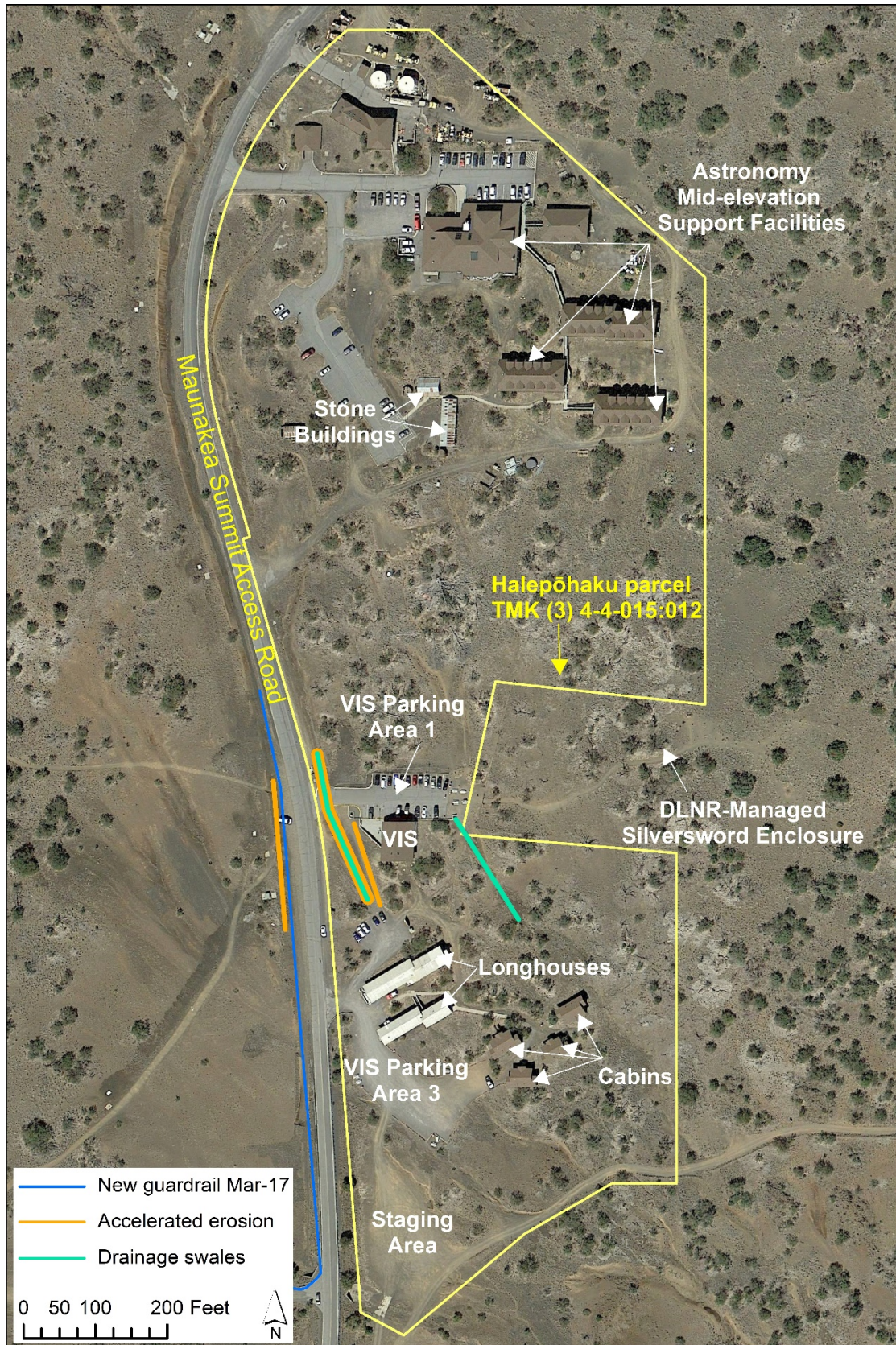


Exhibit 1: Existing Conditions at Maunakea VIS



Figure 4. Maunakea VIS Infrastructure Improvements: Air Photo

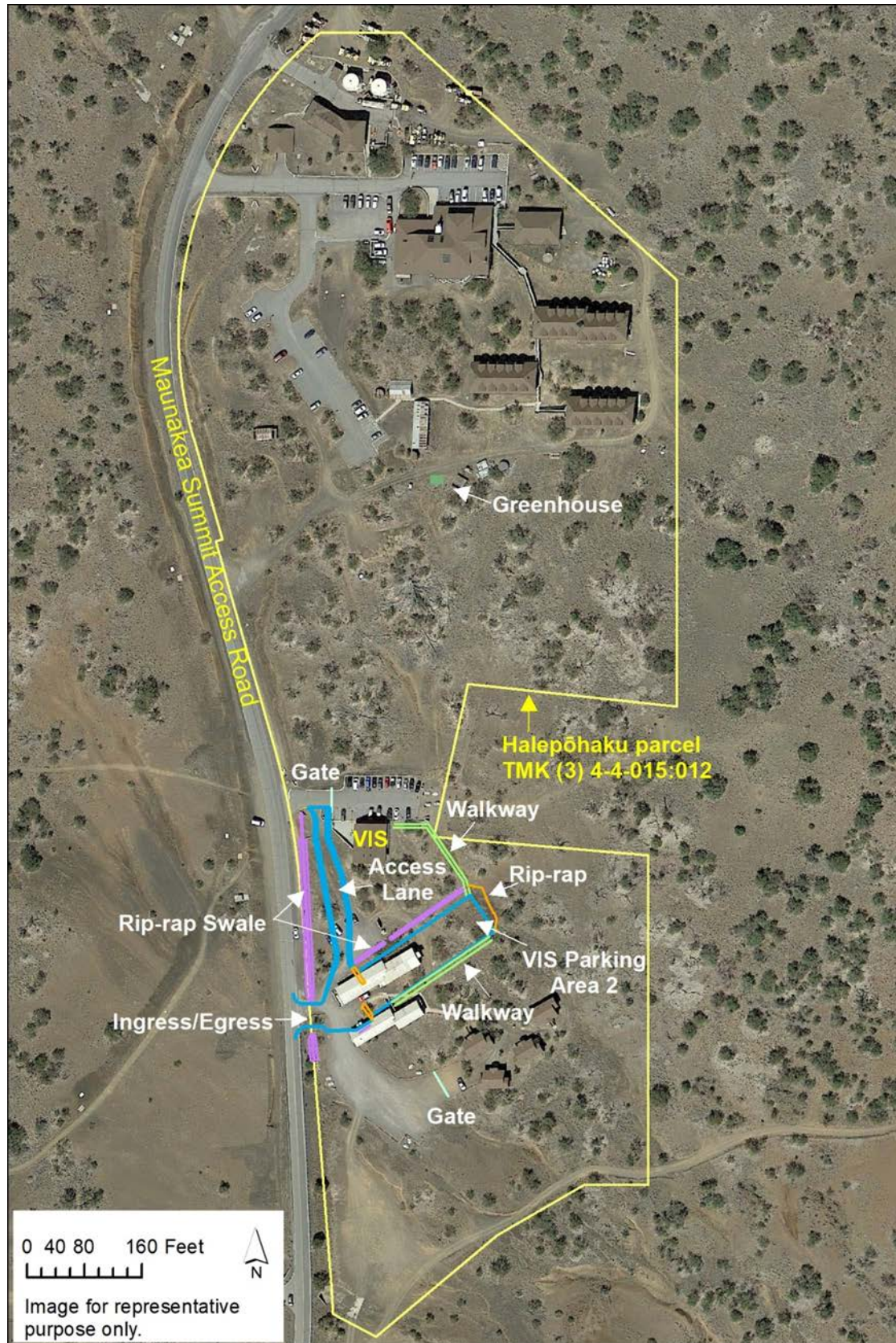


Exhibit 2: Proposed Improvements at Maunakea VIS



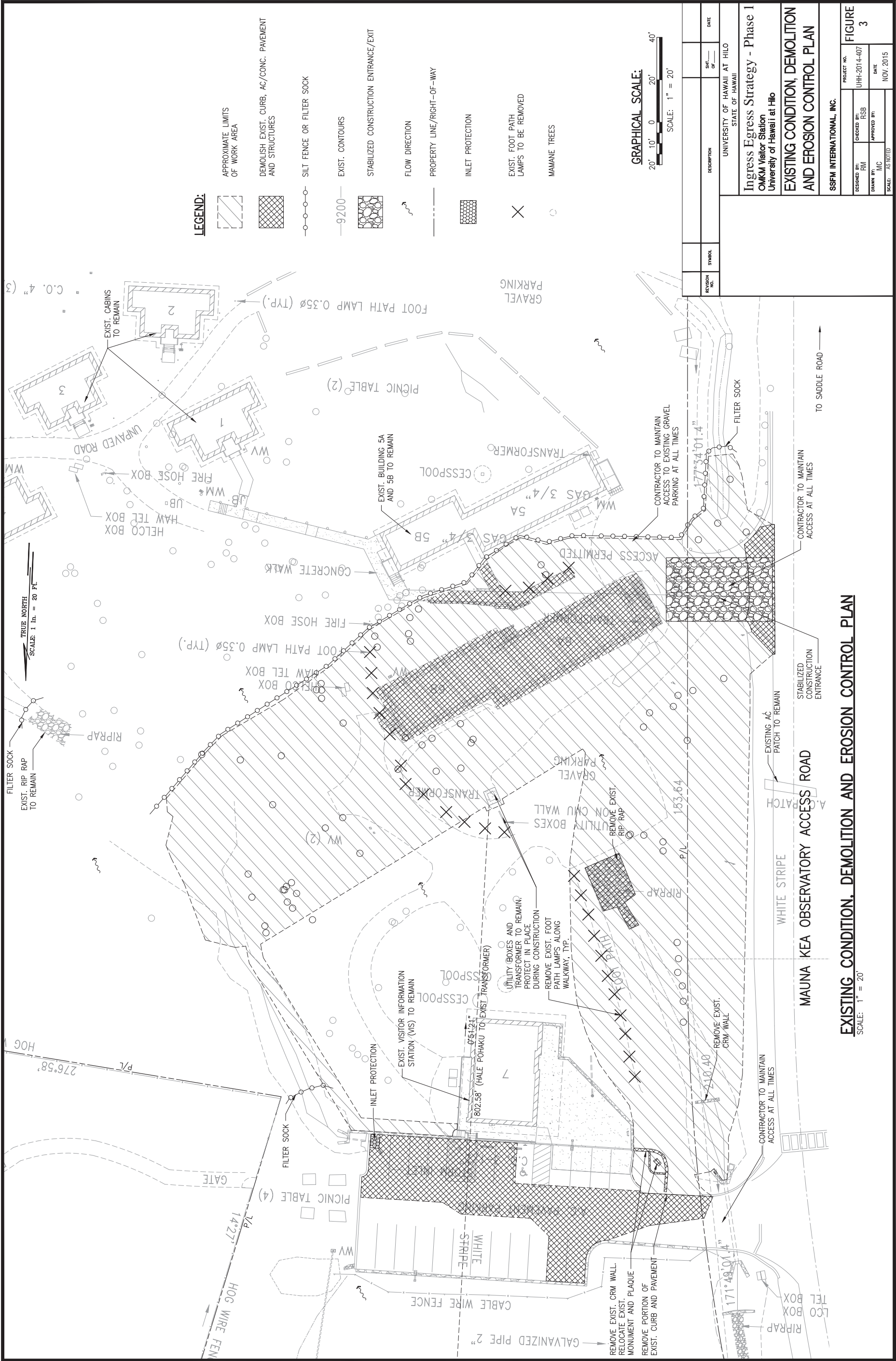


Exhibit 3: Demolition Plan

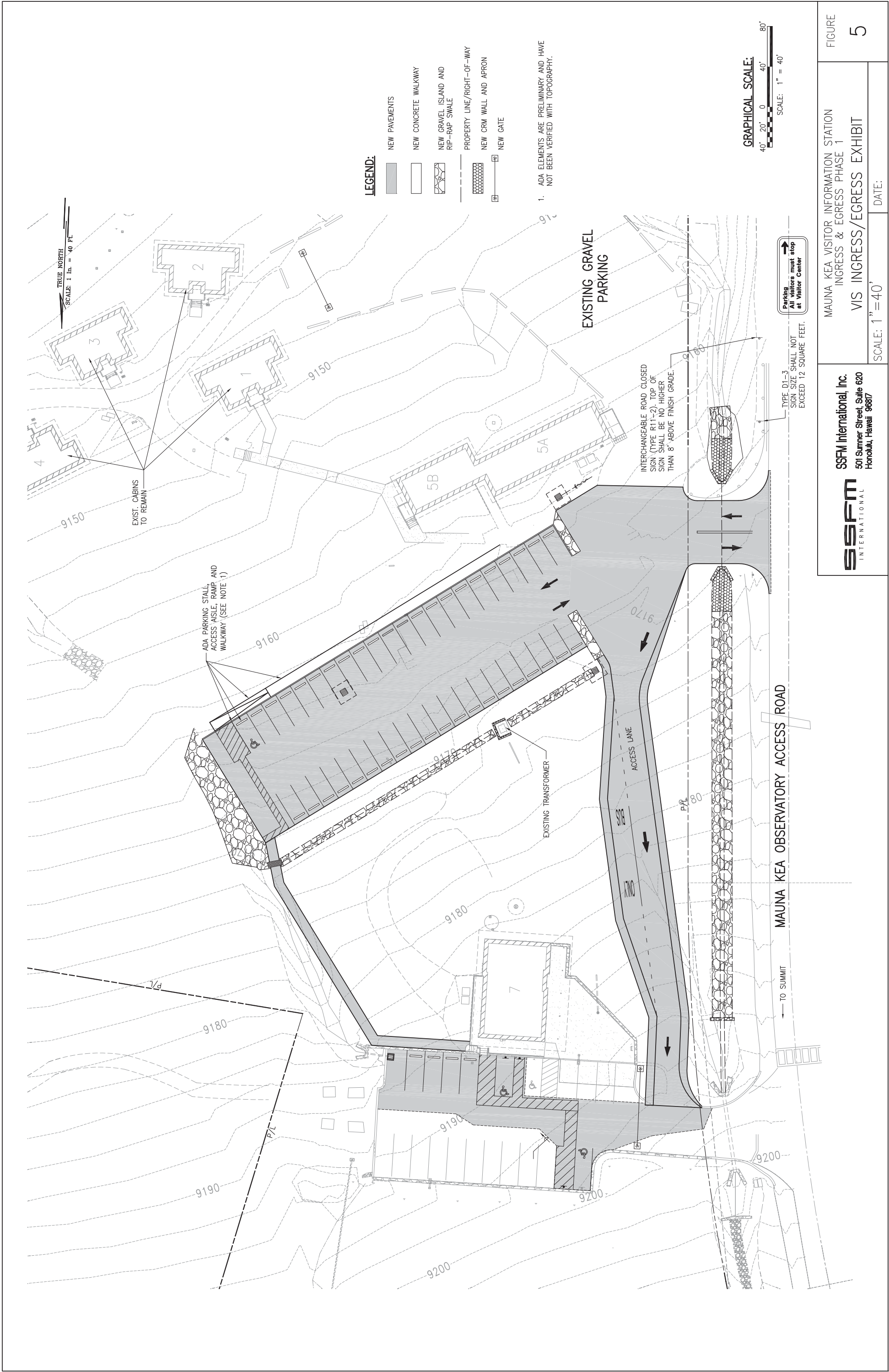
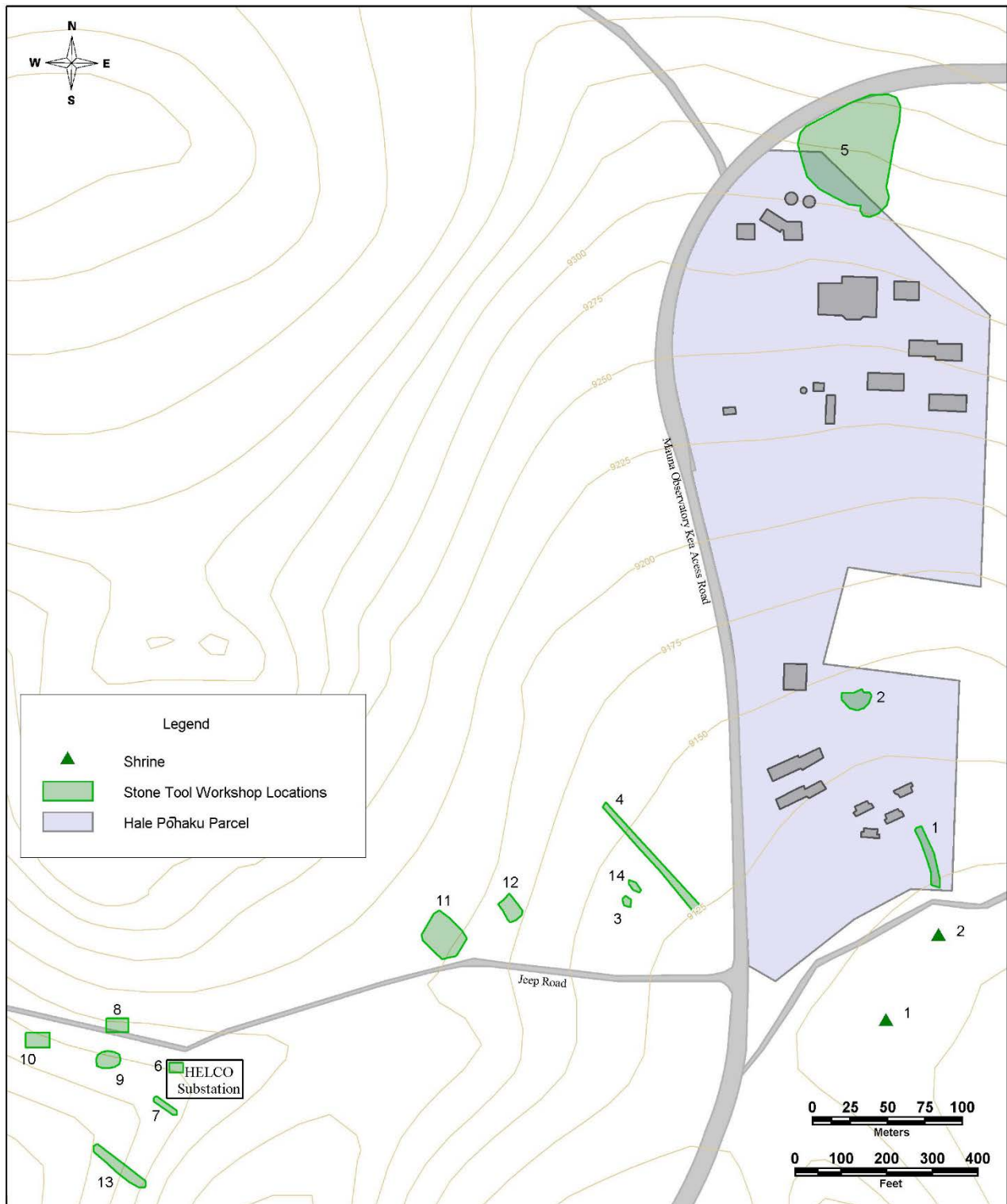


Exhibit 4: Ingress / Egress Exhibit



**Figure 7. Historic Properties in the Halepōhaku Area**

(from PCSI 2009)



**Exhibit 5: Historic Properties in the Halepohaku Area**



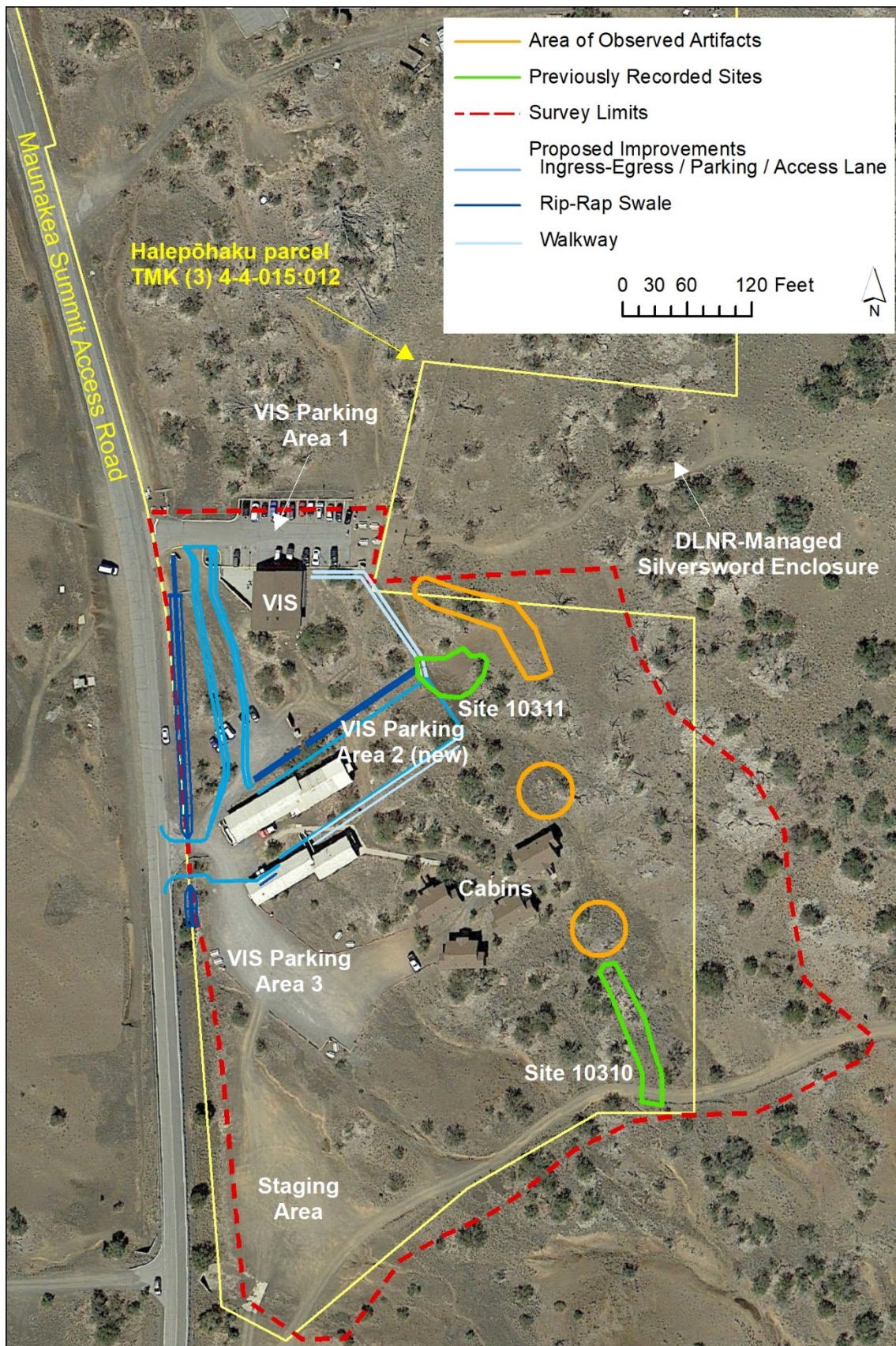


Exhibit 6: Archaeology Survey



Figure 6. Palila Critical Habitat on Maunakea

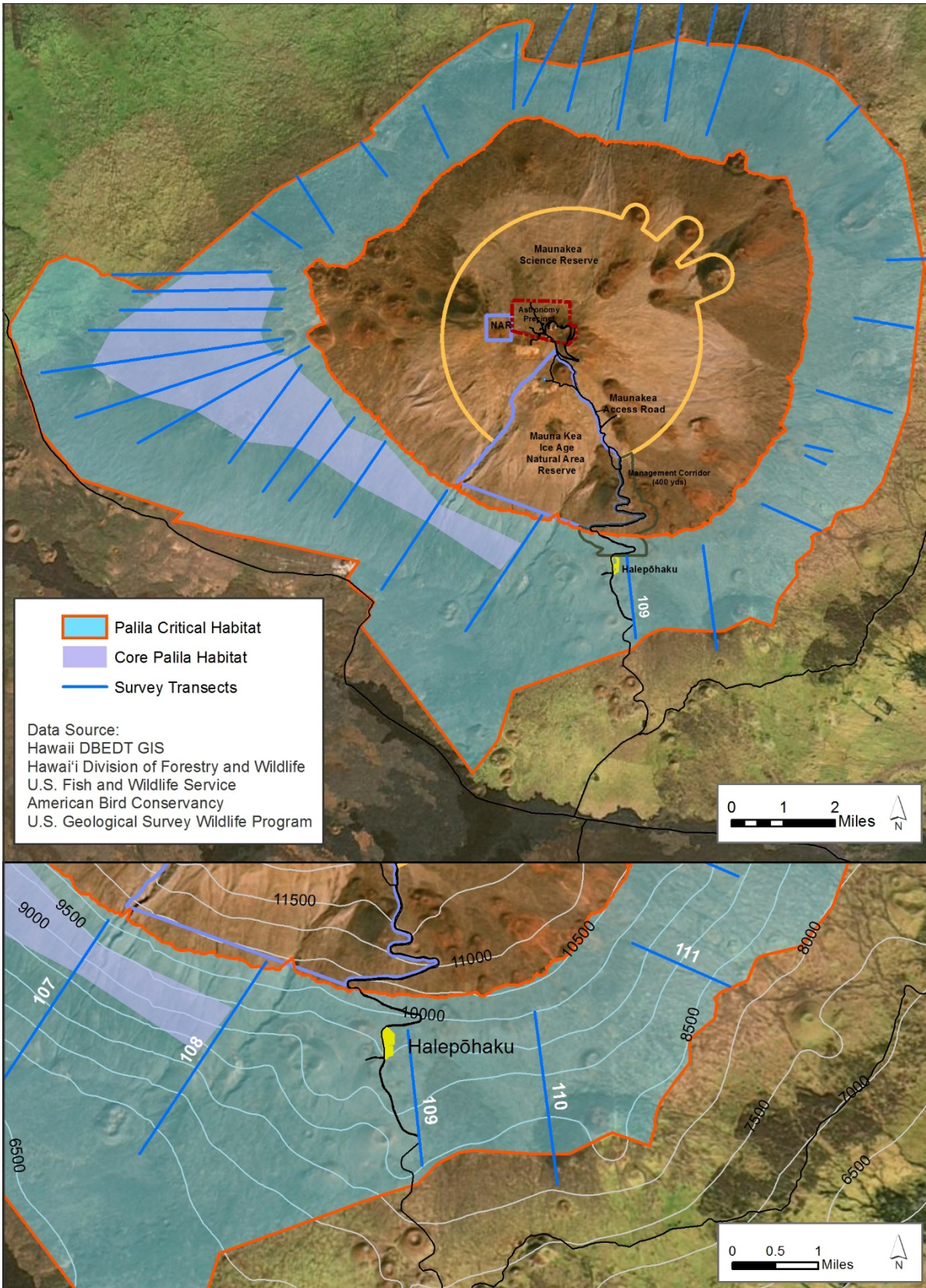


Exhibit 7: Palila Critical Habitat

## **Appendix B. Best Management Practices**

This appendix contains Best Management Practices as outlined in the Stormwater Pollution Prevention Plan submitted as part of the application for the NPDES permit as well as the Conservation District Use Application.

BMPs will insure compliance with any permit requirements, environmental policy documents, and the CMP mandate. Construction activity that requires BMPs includes clearing and grubbing of the project site; grading of an ingress and egress, new parking area, and a new access road; and installation of electrical equipment, signs, posts for the greenhouse and gates. BMPs that will be used during construction and implementation of the proposed land use are outlined in this section as well as detailed in the NPDES (Permit No. HI S000476) from Hawai'i Department of Health, valid from July 29, 2016 – July 28, 2021.

### ***INVASIVE SPECIES PREVENTION AND CONTROL***

The *Maunakea Invasive Species Management Plan* will be applied to this project, including all prevention and inspection requirements identified therein. These requirements include but are not limited to the actions identified below.

### **CLEANING & INSPECTION**

When shipping supplies and equipment to UH Management Areas on Maunakea, operators are required to:

- Minimize materials and dunnage included to the minimum required for safe and secure delivery. If minimizing materials is not possible, then be prepared to remove packing materials for the invasive species inspection.
- Clean vehicles and deliveries. Cleaning includes removal of all plant, animal, and earthen materials on supplies and equipment prior to arrival on Maunakea. Once cleaned and inspected, if diverted to another job outside of Maunakea, vehicle and cargo must be re-cleaned and re-inspected prior to returning to Maunakea.
- Inspect construction equipment and supplies. Inspections are conducted by a DLNR-approved biologist below the Maunakea Summit Access Road - Saddle Road junction, as defined in the *Maunakea Invasive Species Management Plan*.
- Clean and inspect personal belongings. Items are to be cleaned and inspected by the operator prior to entering the Saddle Road.

### **EMERGENCY ACTION**

Should an invasive species be found on vehicles or equipment within Maunakea, the operator is to stop, immediately leave Maunakea, and return to a location below Saddle Road junction where the vehicle or equipment can be cleaned.

If plant, animals, or earthen materials are observed at any time, contain and securely seal the package or delivery (using garbage bag, plastic wrap, etc.), and contact OMKM staff immediately. The contaminated package or delivery is not permitted to proceed to Maunakea until re-inspected and approved by a DLNR-approved biologist.

OMKM Rangers and staff may conduct vehicle inspections on Maunakea at any time to verify cleanliness; this includes unattended vehicles. Vehicle owners will be notified if any concerns are identified.

## **LONGHOUSE RELOCATION**

Prior to relocation or demolition of the longhouse, the inside and outside perimeter of the building will be inspected by a qualified biologist/entomologist for any invasive invertebrates with a focus on species of concern (i.e. ants, bees, and wasps). Inspection will include the use of baited traps. If species with the potential to cause harm to people or the environment are present, allowable methods will be used to treat nests and individuals prior to demolition or moving of structures. If relocated, the recipient will be informed of any findings and treatment methods used prior to the structure being relocated.

## ***MATERIALS STORAGE AND WASTE MANAGEMENT***

If not properly managed, solid and hazardous materials and waste used and stored in construction areas could impact cultural and biological resources, aesthetic and visual characteristics, and water quality in the surrounding area.

To minimize the potential for damage or contamination, construction contractors will implement these measures/methods for materials and waste storage. Materials will be stored in a manner so as to minimize their impact on the surrounding environment.

- The contractor will implement measures to minimize storm water pollution in accordance with a Storm Water Pollution Prevention Plan (SWPPP) attached to the Individual National Pollutant Discharge Elimination System (NPDES) permit.
- When not in use vehicles, machinery and appropriate construction materials will be stored in the Halepōhaku Construction Staging Area.
- “Roll-off” containers will be equipped with secure tops and lids to ensure no debris can escape, including during high winds. Outdoor trash receptacles/containers will be secured to the ground with attached/secured lids and plastic liners to assure that the receptacle, its lid, or its contents will not blow away and the contents will not be exposed to storm water.
- “Roll-off” and other trash containers will be pressure washed immediately prior to every delivery to a site on Maunakea (within 96 hours of delivery) and delivered empty (free of trash or any detectible residue).
- Construction materials and supplies in the Halepōhaku Construction Staging Area will be covered with heavy tarps. Steel cables attached to anchors that are driven into the ground may also be used to secure materials. Materials will be secured at the close of each work-day, and throughout the day during periods of high winds.
- Dumpsters will be collected on a regular basis (weekly) before containers become completely full. If trash and debris begin to exceed dumpster capacity, the dumpsters will be emptied more frequently or more facilities will be brought onto the site.
- Food waste and food containers will be collected separately and removed daily (i.e., food waste, lunch containers, wrappers, etc. will not be disposed of with regular construction debris).
- Waste containers will be picked up and transported off-site by licensed contractors and disposed of at appropriate facilities. Waste containers will be removed from the site within 24 hours if biological materials are identified (by odor, sight, pest aggregations, etc.).
- The contractor will be required, through its construction contract, to provide appropriate and adequate hazardous material training that includes proper and safe handling, correct use and environmental protection methods, safety data sheets, and approved methods for disposal and transport.
- The contractor will be required to ensure that loose tools or equipment are not left unattended and are properly stored at the end of the day.

## **COMPONENTS OF MATERIALS STORAGE MANAGEMENT**

Generally, all materials will be stored per the manufacturer's recommendations and per all county, state, and federal requirements.

### **BULK ERODIBLE MATERIALS**

Bulk erodible materials are generally excavated rock/soil and imported aggregate or other fill materials.

- Contracts must specify and vendors use of 'fresh crush' gravel or fill whenever such materials may be used. Invasive species inspections must also be completed prior to use.
- Aggregate, sand, and other materials necessary for concrete batching, bedding for conduits and other buried utilities, and base course may be imported and used as components of concrete and similar construction materials and uses; however, imported aggregates, sand, and other materials not used for those purposes will be removed from the construction sites once concrete batching is complete. While at the construction sites, these materials will be stored in containers or lined areas to minimize the potential for spillage and to keep them isolated from the environment. Invasive species protocols also apply to such aggregate materials.
- All materials are to be managed per local, state, and federal requirements as well as permit requirements, such as the NPDES permit for the project.
- Sediment controls (socks, bags, etc.) may NOT contain biological material such as compost, wood shavings, excelsior, or similar materials. Materials to be used must be submitted to OMKM for approval in advance.
- Imported materials will be stockpiled in a designated location if it cannot immediately be put to use. The designated location providing adequate setback from waterways and drain inlets.
- Excavated material/stockpiles will be protected when (a) material will not be added or subtracted to a stockpile for a period greater than twenty four (24) hours, and (b) when a significant rain event occurs. Protection measures will include:
  - If the material being stockpiled is deemed wind erodible, the stockpile will be covered with tarps and tarps held in place with rocks, ropes, wood, or other suitable material that can withstand high winds in the summit region.
  - Isolation devices including fiber roll/sock, and/or silt fence will be used around the stockpile.

### **PETROLEUM PRODUCTS, OTHER CHEMICALS, AND HAZARDOUS MATERIALS**

The policies detailed in the SWPPP govern the management of these materials.

- Petroleum and hazardous materials required for the work will be stored properly in tightly sealed containers that are clearly labeled.
- Storage areas for petroleum products, other chemicals, and hazardous materials will have the following attributes:
  - Be clearly labeled (preferably in original containers), including appropriate warning placards, and tightly sealed when not in use.
  - Be covered and elevated at least 6-inches off the ground surface (i.e., on pallets).
  - Have secondary containment.
  - Be placed away from storm water conveyances and drains.
  - Have a spill kit, appropriate to the type and volume of products stored.
  - Meet all local and state solid-waste management regulations.
  - Whenever possible, all of a product will be used up before disposing of the container. If the product is a hazardous material, surplus product must be disposed of following

1 manufacturers' or local and State recommended methods for proper disposal prior to  
2 disposing of the container.

- 3 • The storage of petroleum products or hazardous materials outside of designated areas will not  
4 be allowed. These materials are only to be removed from designated storage areas during times  
5 of active use and returned promptly when that use is complete.
- 6 • The hazardous waste material storage area will be inspected weekly and after storms.
- 7 • Additional measures related to petroleum and hazardous materials storage include:
  - 8 – An accurate and up-to-date inventory of such materials at the site will be maintained. The  
9 inventory of such materials on-site will be kept to a minimum, only enough product  
10 required to do the job will be stored on-site.
  - 11 – Safety Data Sheets for all materials stored in the area will be available to site workers.
  - 12 – Substances will not be mixed with another unless recommended by the manufacturer.
- 13 • Paving and painting will be avoided during wet weather.
- 14 • Paint washing effluent will not be permitted to be discharged directly onto the ground or in any  
15 drainages.
- 16 • Clean water based paint application equipment in an impermeable containment area where  
17 dried paint can be readily removed.

#### 18 **SPILL PREVENTION AND RESPONSE**

- 19 • Vehicles and equipment will be inspected on each day of use for any leaks or problems that could  
20 lead to a leak.
- 21 • Contractor and its subcontractors who will be doing the refueling shall include in their work plans  
22 measures to minimize the potential impact of a spill or unintentional release of hazardous  
23 materials on the surrounding environment. To prevent overflow due to expansion with changes  
24 in elevation, all fuel tanks shall not be more than three-quarters full prior to transport to the  
25 summit.
- 26 • Contractor will provide appropriate spill and response education and training to their personnel.  
27 The education and training includes standard spill prevention practices and spill response  
28 procedures. The contact information for Federal, State and County organizations and emergency  
29 response teams that should be notified in the event of a spill is included in Contractor's safety  
30 plan.
- 31 • Contractor and applicable subcontractors will have appropriate spill response materials and  
32 equipment stored and available at the locations where lubricating materials and fuel are stored  
33 and used, including water and equipment transport vehicles and associated support equipment.
- 34 • A spill kit will be kept with the equipment and work vehicles that travel to the Project sites in  
35 case of accidents.
- 36 • Clean up response to spills will be done promptly. The project acknowledges that if a Reportable  
37 Quantity is exceeded, the appropriate authorities (including OMKM) will be notified. All spills,  
38 regardless of quantity, will be logged and reported to the Construction Monitor.

## **EROSION, WATER QUALITY AND AIR QUALITY**

The policies and procedures to prevent erosion and maintain water quality are detailed in the SWPPP govern the management of these materials.

- The overall construction sequence shall begin with the installation of sediment and erosion control measures, which shall include a stabilized construction entrance/exit, silt fences, and filter socks (Figure 3). All control measures will be put in place and made operational prior to earth disturbing activities. Vehicles will be restricted to using the designated entry/exit point.
- The construction entrance/exit will consist of a stabilized pad of aggregate underlain with filter cloth located at the entrance/exit to the contractor staging area. The purpose of a stabilized construction entrance/exit is to reduce or eliminate the tracking of sediment onto adjacent paved roadways. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into storm water conveyances and production of airborne dust.

### **Maintenance of BMPs:**

- BMPs shall be inspected prior to forecast rain, daily during extended rain events, once every seven calendar days, and within 24 hours after a storm event of 0.25 inches or greater.
- After inspection, routine maintenance and repairs shall be initiated immediately, and completed by the close of the next work day. Replacements or significant repairs shall be implemented by no later than seven calendar days from the time of discovery.

### **For Silt Fence and Filter Socks:**

- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment shall be removed when the sediment accumulation reaches one-half of the above ground height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Repair or replace silt fence and/or filter sock if it becomes damaged.
- Significant washout may indicate the need for additional BMPs such as a compost blanket or additional silt fence.
- Silt fence and/or filter sock shall remain in effective operating condition and shall be protected from activities that would reduce its effectiveness until project disturbed areas are stabilized.

### **For Construction Entrance/Exit:**

- Inspect roads adjacent to site daily. Sweep to remove visible accumulated sediment. Where sediment has been tracked-out from the site onto the surface of off-site streets, other paved areas, and sidewalks, the contractor shall remove the deposited sediment by the end of the same work day in which the track-out occurs or by the end of the next work day if track-out occurs on a non-work day. The contractor shall remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. The contractor will refrain from hosing or sweeping tracked-out sediment into any stormwater drain inlet or surface water.
- If construction entrance/exit is clogged with sediment, aggregate will be separated from sediment and sediment disposed of and aggregate put back in place.
- Replace gravel material when surface voids are visible.
- Temporary stabilized construction entrance shall remain in effective operating condition and shall be protected from activities that would reduce its effectiveness until project disturbed areas are stabilized.



1 **General:**

- 2 • Erosion control methods that include use of biological material (hay bales, compost, wood  
3 shavings, excelsior tubes, etc.) are not permitted.
- 4 • Stabilization of any exposed slopes shall be done by compacting the soil and covering with native  
5 cinder.
- 6 • Contractors are not to perform any construction operation that would cause falling rocks, soil, or  
7 debris in any form to fall, slide, or flow into existing drainages or natural watercourses.  
8 Additionally, construction activities with the potential to produce polluted runoff will not be  
9 permitted during heavy rains or storm conditions that might generate storm water runoff. The  
10 project will utilize perimeter controls around the project site where stormwater sheet flow from  
11 earth-disturbing activities will need to be intercepted. The perimeter controls will collect the  
12 sheet flow runoff, allowing sediment to settle out, and release runoff slowly as sheet flow,  
13 preventing sediment migration offsite and preventing erosion from occurring outside the project  
14 boundaries. Filter socks will be placed to prevent sediment from being washed into constructed  
15 drywells and inlets. The construction monitor will ensure the contractor conforms with all  
16 applicable provisions of the water quality and water pollution control standards contained in  
17 HAR 11-54, *Water Quality Standards*; HAR 11-55, *Water Pollution Control*; and Chapter 10 of the  
18 Hawai'i County Code, *Erosion and Sedimentation Control*.
- 19 • Wash out runoff must be contained. Disposal of wash water via percolation is prohibited. Create  
20 a concrete/asphalt truck wash out area on-site, prior to pouring concrete, with a pre-fabricated  
21 impervious container or impermeable membrane, to hold all wash-out water. Concrete/asphalt  
22 truck wash water will be left to allow water to evaporate and the dried concrete left behind will  
23 be properly disposed of at an approved disposal site.
- 24 • Construction activities with the potential to produce polluted runoff will not be permitted during  
25 heavy rains or storm conditions that might generate storm water runoff.
- 26 • The contractor shall comply with HAR 110-60. 1-33 *Fugitive Dust*. Water shall be applied to  
27 control dust when necessary. If water use to control dust is generating run-off, the method or  
28 amount will be adjusted to prevent run-off.

29 **Removal of BMPs:**

- 30 • Disturbed areas will be stabilized with native cinder.
- 31 • Silt fence and/or filter sock will be removed when no longer needed. Remove sediment  
32 accumulation and clean, re-grade, and stabilize the area. Removed sediment should be  
33 incorporated in the project or disposed of.
- 34 • Remove gravel and filter fabric at completion of construction and restore the area.

35 **Long term:**

36 Designs to minimize post-construction long-term erosion due to runoff were incorporated into the  
37 infrastructure improvement plans. Under build-out conditions, the drainage design allows for runoff into  
38 and via the following features within the project area: three drywells, gravel islands, a new lined drainage  
39 swale, and an improved existing swale (Figure 4 and Figure 5). The drywells will discharge runoff within  
40 the project area, while the two swales carry runoff and discharge into natural drainage channels south of  
41 the project area. Gravel islands will be aligned to intercept sheet flow, and prevent erosion via slowing  
42 water velocity and filtering runoff. A portion of the runoff from the VIS access lane will be directed into  
43 the drywell located at the northwest corner of VIS Parking Area 2. This drywell will be installed at the west  
44 end of a new interceptor swale that will be aligned parallel to and run along the north end of the new VIS  
45 Parking Area 2. The swale will be lined with riprap and will intercept sheet flow generated off the

undeveloped 0.20 acre area south of the VIS building. The swale will be sloped to drain approximately one-third of the runoff intercepted into the drywell. The remainder of the water will be routed to the east and discharged at the northeast corner into an existing natural swale. This swale starts at the southeast corner of the VIS Parking Area 1 and is aligned in a southeasterly direction. The section of the swale that is adjacent to the east side of the new VIS Parking Area 2 will be fitted with riprap to protect the edge of the parking area and prevent erosion of the swale. There is no additional runoff from the build-out that will be routed into this swale.

Runoff generated off most of VIS Parking Area 2 will be routed into a second drywell that will be installed along and within the VIS Parking Area 2. A third drywell will be installed at the intersection of the southwest corner of the VIS Parking Area 2 and the new ingress/egress. Runoff from the western third of VIS Parking Area 2 and a portion of the new ingress/egress will be routed into this drywell. A new riprap swale will be installed from the outlet of the existing swale culvert outlet at the VIS Parking Area 1. The swale will run along the Maunakea Summit Access Road shoulder and be carried under the new ingress/egress to VIS Parking Area 2 via a 24 inch culvert and continue downslope to its outlet at an existing channel located immediately south of the construction staging area. This swale will carry existing condition runoff and a portion of runoff generated off the VIS access lane.

#### **ADDITIONAL DISTURBANCE AND ENCROACHMENT**

- Contractor is to minimize the existing terrain disturbance as much as possible. Toe of cut and fill as shown on the design drawing is the extent of the terrain disturbance required to maintain elevation and slope. The contractor shall not go beyond the edge of disturbance with any equipment, vehicle, etc. and take all means to minimize the disturbance of the natural terrain. The NPDES permit outlines steps to prevent disturbance of land beyond that which is necessary. Construction contractors will submit their plans and procedures that will be implemented to comply with the Project NPDES. Items to be addressed are: the requirement for flagging of the planned limits of the disturbance by surveyors and the location of nearby property boundaries prior to the start of construction and monitoring of construction activities to verify no disturbances beyond the flagged/designated area.
- During the construction phase, any ground disturbing activity will be monitored by an archaeological monitor.
- The contractor will submit a *Rock Movement Plan* based of parameters set by OMKM.

#### **CULTURAL AND NATURAL RESOURCE PROTECTION REQUIREMENTS**

##### **CULTURAL AND NATURAL RESOURCES TRAINING PROGRAM**

- All personnel, and all contractor, supplier and vendor personnel performing work on Maunakea as part of the project will undergo cultural and natural resource training, provided by OMKM, before performing work at the site.
- All work will be performed in accordance with the principles and frequency established in the Maunakea User Orientation. Any person not behaving in a manner consistent with the principles established in the Maunakea User Orientation will be required to leave the project site.

##### **CULTURAL, ARCHAEOLOGICAL AND ENVIRONMENTAL MONITORING PLAN**

- The project will provide independent archaeological monitor.
- Should historic properties such as artifacts, burials, or concentration of charcoal be encountered during work activities, work shall cease immediately and the find shall be protected from further damage. The contractor shall immediately contact OMKM who will contact SHPD (808-692-8015),

1 which will assess the significance of the find and recommend an appropriate mitigation measure  
2 when necessary.

- 3 • The project will provide a construction monitor who will report any violations of contract, BMPs,  
4 or other issues that may impact natural and cultural resources directly to OMKM, and UH Hilo. Any  
5 violations of conditions stipulated in the Conservation District Use Permit (CDUP) will be reported  
6 to DLNR.

May 18, 2018

Sam Lemmo / Michael Cain  
Department of Land and Natural Resources  
Office of Conservation and Coastal Lands  
P.O. Box 621  
Honolulu, HI 96809

Re: Conservation District Use Application HA-3812, *Infrastructure Improvements at Maunakea Visitor Information Station*, Response to Comments and Additional Information

Aloha,

This information is being submitted in support of Conservation District Use Application (CDUA) HA-3812, *Infrastructure Improvements at Maunakea Visitor Information Station* (VIS). The information covers both responses to public and agency comments, and additional information for consideration that arose as a result of considering the comments. The Office of Maunakea Management (OMKM), project proponent, has been consulted on and concurs with the responses and proposed additional actions.

#### **Office of Conservation and Coastal Lands (OCCL) Inquires**

Based on the comments received during the public comment period and public hearing conducted February 28, 2018, OCCL had inquires on three topics (in *italics*). Responses are detailed below.

##### ***Māmane Monitoring***

*The current plan is to replant māmane at an approximately 2:1 ratio (i.e. two saplings will be planted for every māmane that is removed). The saplings will be monitored for two years, and if the survival rate is less than 80% then the permittee will replant more saplings.*

*Sierra Club noted that 2-year old saplings are still small, and requested a longer monitoring period.*

*Can we get a response from OMKM on this proposal? It would also help us to know how large / viable māmane saplings are at two years.*

Based on other out-planting activities and restoration programs on Maunakea, it appears that a two-year monitoring period is sufficient to establish success (to the 80% threshold) of māmane. Long-term monitoring of these and other out-plantings will occur as part of OMKM's established natural resources management program. OMKM would prefer to tie future success to its overall natural resources management program, which already includes monitoring and reporting, rather than monitoring specific plants on a project-by project basis for extended time periods.

Based on past experience out-planting māmane at Halepōhaku, two years after planting the saplings are likely to be 1-2 feet tall, and if any mortality occurs it would be related to trampling that would be of a scope documented in the daily Ranger reports and summarized in annual natural resource condition monitoring reports. Landscape scale disease or mortality events, such as the insect-related leaf curl concerns identified in 2014, are also documented in annual natural resource reports and are not a project-specific topic.

### **Restroom Facilities**

*We anticipate that questions on sanitation will come up again before the Board. Our understanding is that the restrooms are locked at 10 pm, when the VIS closes and official stargazing activities end. OMKM reports that they began locking the facilities at night due to some vandalism incidents. There are currently two portable restrooms at the VIS, and two in Parking Area 2.*

*A tour guide noted that sunrise viewing is gaining in popularity, and that there are three companies bringing approximately 50 people to the VIS at 3 am. He also noted that most guests only use the upper level portables, and that many are tempted to use the bush rather than trek down to the lower level lua. He also expressed concern that the project would remove the two lower-level ones.*

*Can we get a response from OMKM on the possibility of, at least temporarily, relocating the two other lua rather than removing them? Any other comments that OMKM has on sanitation facilities and current capacity would be appreciated.*

The VIS is open every day until 10 p.m. The VIS opening time is dependent upon staff availability and funding. Currently the VIS opens at 12:00 p.m., but the program goal is to open at 9 a.m. When the VIS is closed, the facility is locked and secured, including the VIS restrooms. For comparison, Hawai'i County and National Parks typically close their public restrooms each evening due to vandalism and misuse concerns.

Four portable restrooms are available for visitors to the Halepōhaku area, two lua directly behind the VIS and two adjacent to the lower level longhouse. These portable restrooms are open 24 hours a day and are maintained by Maunakea Support Services (MKSS). All four lua would remain open 24 hours a day during construction. The two lua near the longhouse would not be removed but could be relocated if blocked by construction. OMKM and MKSS would ensure that all four portable restrooms remain near parking areas and accessible to the public during construction activities.

Rangers and VIS staff monitor grounds surrounding the VIS daily and submit daily reports to OMKM and MKSS. Visitor use relative to restroom capacity is monitored by MKSS and appropriate approvals will be sought to adjust the number of portable restrooms as needed.

### **Parking Lot Capacity**

*A concern was raised that the current proposal will still not meet the current parking needs on popular nights. We understand from OMKM that this project was limited by available funds.*

*Can we get a response on what the actual needs are (i.e. how many nights will there still be overflow parking, and how many vehicles might still be using unimproved parking areas?)*

OMKM acknowledges that the proposed project will not meet the entire current parking needs. This project was limited by available funds. Future plans for permanent parking will be influenced by upcoming new land authorizations; a desire to not harden more surface area than required; and identified demand. The Maunakea Administrative Rules, expected to be effective in 2019, will help manage the number of tour operators to ensure sustainable use of the area.

The Stargazing program is currently conducted on Tuesday, Wednesday, Friday, and Saturday. As detailed in the EA, "On moderately busy nights, there are normally approximately 120 visitor vehicles and eight staff vehicles. On an extremely busy night there may be as many as 200 vehicles." "On an average busy evening, eight to ten commercial vehicles would be at the VIS at one time."

With the addition of the proposed VIS Parking Area 2, there would be parking for 64 vehicles in marked stalls in improved lots (VIS Parking Areas 1 & 2). Overflow parking would continue to be directed to VIS Parking Area 3 (capacity of 55 vehicles) and if necessary and if available, the staging area (capacity of 60

vehicles). It is anticipated that overflow parking would be needed on most nights from late spring to late fall and during some holidays (end of year and spring break). Other times during the year overflow parking would be used mostly on weekends when the weather is good.

### **Public Comments**

The following agencies/individuals provided comment via mail or email.

- |                      |                                  |
|----------------------|----------------------------------|
| - DLNR Land Division | - Page Else                      |
| - DLNR DOFAW         | - Office of Hawaiian Affairs     |
| - Terrance Noda      | - U.S. Fish and Wildlife Service |

Responses to comments dated May 18, 2018 were sent via email and/or U.S. Postal mail to each party that commented. OCCL and OMKM were copied on the responses (Appendix A).

### **Requested Changes to CDUA**

In considering the comments made on the CDUA, we would like to propose the following minor changes to the application before it moves to the Land Board for consideration.

#### ***Signs***

OMKM, MKSS, DLNR-DOFAW Na Ala Hele representatives, and the project engineer met on April 5, 2018 to discuss additional signage to address concerns raised by Na Ala Hele and others. In part based on comments from DLNR Na Ala Hele, a request to modify the proposed signage (discussed on CDUA pg 4) is being submitted. Appendix B details 1) existing signs that will be retained, and 2) all new signs and pavement markings that will be added. As indicated in Footnote 4 (CDUA pg 4): "All new signage would conform with regulations set forth in HAR 13-5-22". The addition of signs does not change the effects analysis discussed in the Final Environmental Assessment.

#### ***Endangered Species***

Although nēnē have never been recorded at Halepōhaku, in response to comments from DLNR DOFAW: Nēnē will be added to the list of birds that are surveyed for (CDUA pg 25). OMKM will contact DOFAW if a nēnē nest is found.

#### ***Accessible Parking Spaces***

The number of accessible and regular parking spaces in VIS Parking Area 1 has been revised. The number of accessible parking spaces would be three, not four as stated in the CDUA (CDUA p. 4). The number of regular parking spaces in VIS Parking Area 1 would be 19, not 18 as stated in the CDUA.

#### ***Regarding Qualified Archaeologist***

The CDUA states that a qualified archaeologist will be retained by the contractor to monitor all ground disturbing activity. In responses to comments from OHA, we would like to clarify that the archeologist will be informed about the location of the recently discovered lithic artifacts (October 2016 site visit) as well as previously recorded sites. Based on our consultation with SHPD, OMKM submitted a project-specific archaeological monitoring plan to SHPD for review on May 10, 2018.

Please let us know if OCCL has any additional questions on the CDUA for the subject project.

Best,

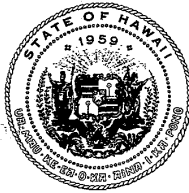
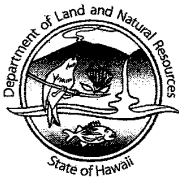
Kristin Duin, President

Cc: Stephanie Nagata, Fritz Klasner, Office of Maunakea Management

## **Appendix A: Public Comments and Responses**

- DLNR Land Division, Gordon Heit
- DLNR DOFAW, James Cogswell
- Terrance Noda
- Page Else
- Office of Hawaiian Affairs, Kamanaʻopono M. Crabbe, Ph.D.
- U.S. Fish and Wildlife Service, Michelle Bogardus and Jodi Charrier

DAVID Y. IGE  
GOVERNOR OF HAWAII



SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

RECEIVED  
OFFICE OF CONSERVATION  
AND COASTAL LANDS

2018 JAN 16 A 11 STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

OFFICE OF CONSERVATION AND COASTAL LANDS  
NATURAL RESOURCES POST OFFICE BOX 621  
STATE OF HAWAII HONOLULU, HAWAII 96809

2018 JAN -5 P 3:04

RECEIVED  
LAND DIVISION  
HILO, HAWAII

ref:OCCL:MC

CDUA HA-3812

180 Day Deadline: June 27, 2018

MEMORANDUM

JAN -2 2018

To: DLNR

☒ Division of Forestry and Wildlife  
☒ Land Division  
☐ Historic Preservation Division

☐ Office of Hawaiian Affairs  
☐ US Fish and Wildlife Service  
☐ State Office of Planning  
☐ County Planning Department

FROM: Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands

SUBJECT: REQUEST FOR COMMENTS – CONSERVATION DISTRICT USE APPLICATION HA-3812  
*Infrastructure Improvements at Mauna Kea Visitor Center*

LOCATION: Hale Pōhaku Mid-level Facilities, Ka'ōhe, Hāmākua, Hawai'i

TMK: (3) 4-4-015:012

Please find Conservation District Use Application (CDUA) HA-3812 for the proposed infrastructure improvements at the Mauna Kea Visitor Center on the above subject parcel. We would appreciate any comments your agency or office has on the application. The application and supporting documents can also be found on our website at [dlnr.hawaii.gov/occl/current-applications](http://dlnr.hawaii.gov/occl/current-applications).

A public hearing on the application will be on a date to be determined. The time and location will be posted on OCCL's website.

If no response is received by the suspense date of February 22, 2018 we will assume there are no comments.

Please contact Michael Cain at 587-0048, should you have any questions on this matter.

☒ Comments Attached

☐ No Comments

attachment: CDUA (disc); Acceptance Letter

Gordon C. Heit  
Hawaii District Land Agent

Signature

JAN 12 2018



DAVID Y. IGE  
GOVERNOR OF HAWAII



SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT


**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION**

75 Aupuni Street, Room 204  
Hilo, Hawaii 96720  
PHONE: (808) 961-9590  
FAX: (808) 961-9599

January 12, 2018

**MEMORANDUM**

TO: Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands

FROM: Gordon C. Heit, Hawaii District Land Agent 

SUBJECT: Request for Comments, Conservation District Use Application (CDUA) HA-3812  
Infrastructure Improvements at Mauna Kea Visitor Center

LOCATION: Hale Pohaku Mid-level Facilities, Ka'ohe, Hamakua, Island of Hawaii, TMK (3)  
4-4-015:012.

APPLICANT: University of Hawaii at Hilo

Pursuant to your request for comments on the above matter, we offer the following:

The above described property is under the management of the Department of Land and Natural Resources, Land Division and is leased to the University of Hawaii at Hilo under General Lease No. S-5529 for permanent mid-level facilities, a construction camp, an information station as well as existing facilities purposes. The description of the improvements as detailed in the CDUA HA-3812 are consistent with the lease terms and conditions. The Hawaii District Land Office has no objections to the project.

Please contact me should you have any questions. Thank you.

May 23, 2018

Gordon Heit  
State of Hawai'i  
Department of Land and Natural Resources  
Land Division  
75 Aupuni St, Room 204  
Hilo, HI 96720

Re: Comments on Conservation District Use Application (CDUA) HA-3812 Infrastructure Improvements  
at Maunakea Visitor Center

Dear. Mr. Heit,

Thank you for your comments dated January 12, 2018 on the above referenced CDUA confirming that the proposed improvements detailed in CDUA HA-3812 are consistent with the lease conditions under General Lease No. S-5529. We acknowledge that the Hawai'i District Land Office has no objections to the project.

We appreciate your input and participation in the subject CDUA.

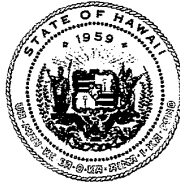
Best,

A handwritten signature in black ink, appearing to read 'Kristin Duin', is positioned above the printed name.

Kristin Duin  
President

cc: Samuel J. Lemmo, Administrator, DLNR Office of Conservation and Coastal Lands  
Stephanie Nagata, Director, Office of Maunakea Management

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE  
1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

February 21, 2018

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

TO: Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands

ATTN: Michael Cain

FROM: James Cogswell  
Wildlife Program Manager

SUBJECT: Division of Forestry and Wildlife Comments on the Conservation District Use  
Application HA-3812, Infrastructure Improvements at Mauna Kea Visitor Center

The Division of Forestry and Wildlife has received your inquiry regarding the Conservation District Use Application HA-3812, infrastructure improvements at Mauna Kea Visitor Center located in Hamakua, Hawaii. The proposed action would include the relocation of one of the longhouses north of VIS, construction of a new access lane, 42 stall paved parking lot, and a new green house. Modifications to the existing parking lot are proposed along with installation of new walkways, gates, relocation of one Subaru construction cabin and drainage improvements encompassing a two acre area.

#### Endangered Species

The State and Federally listed Hawaiian hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*) has the potential to occur in the vicinity of the proposed project. DOFAW recommends to avoid using barbed wire, as bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight.

The State and Federally listed Hawaiian goose, or Nēnē (*Branta sandvicensis*) may occur in the vicinity of the proposed project site. To minimize the potential for take, surveys for Nēnē by a qualified biologist are recommended before any land clearing or excavation activities occur, and should be repeated if these activities are delayed more than three days. If a nest is discovered at any point, please contact DOFAW staff. If a bird is present during ongoing activities, then all activities within 100 feet (30 m) of the bird should cease, and the bird should also not be approached. Work may continue after the bird leaves the area of its own accord.

DOFAW notes that artificial lighting can adversely impact seabirds that may pass through the area at night causing disorientation which could result in collision with manmade artifacts or grounding of birds. If nighttime lighting is required DOFAW recommends that any lights used be fully shielded and downward facing to minimize impacts.

## Na Ala Hele

We have reviewed the above mentioned CDUA application and supporting documents. We are generally in support of the plans to accommodate the ever-increasing parking demands at the Visitor Center utilizing already developed areas, however, we do have concerns on the flow of traffic into the overflow areas just below the project site.

Currently, and according to these plans, the over flow parking lots just below the project area is fed by flowing traffic from above that exits at the lower end of the parcel. This area, however is the start of a Nā Ala Hele Program Trail, the Mauna Kea Access Road (R-1), the trailer parking area for the Mauna Kea ATV and Dirt Bike Riding Area, and entry point into the Mauna Kea Forest Reserve (all managed by DOFAW). On busy evenings, all OMKM parking areas and overflow lots can be easily filled, and users then park within the Mauna Kea Forest Reserve, along and within the Mauna Kea Access Road corridor and within the ATV trailing parking area. In fact, Figure 12 on page 36 of the Final EA for this plan shows a picture of at least 46 cars parked in this area. Mauna Kea Forest Reserve users, especially those parking their ATV trailers, cannot access their vehicles when blocked in.

To help manage the ever-increasing parking demand at the Visitor Center, we would like to request that:

- OMKM post signs (in coordination with Nā Ala Hele) stating that the areas outside of the OMKM properties are only for ATV and Dirt Bike users of the Mauna Kea Access Road (R-1).
- OMKM rangers and parking management staff notify DOCARE to any illegal activities that occur within the Forest Reserve such as commercial activities, parking in the ATV trailer parking area, etc.
- OMKM revise the traffic flow plan so vehicles are not driving out through the bottom of the parcel. As it is now, users exiting the OMKM property assume the ATV trailer parking area is just a continuation of the overflow parking.

We look forward to working with OMKM in accommodating the multiple users' parking demands in this area. Please feel free to contact Jackson Bauer at the Nā Ala Hele Trails and Access Program at 808-657-8041 or [jackson.m.bauer@hawaii.gov](mailto:jackson.m.bauer@hawaii.gov).

We appreciate your efforts to work with our office for the conservation of native species. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact James Cogswell, Wildlife Program Manager at (808) 587-4187 or [James.M.Cogswell@hawaii.gov](mailto:James.M.Cogswell@hawaii.gov).

May 23, 2018

James Cogswell  
State of Hawai'i  
Department of Land and Natural Resources  
Division of Forestry and Wildlife  
1151 Punchbowl St, Rm 325  
Honolulu, HI 96813

Re: Comments on Conservation District Use Application (CDUA) HA-3812 Infrastructure Improvements at Maunakea Visitor Center

Dear. Mr. Cogswell,

Thank you for your comments dated February 21, 2018 on the above referenced CDUA regarding both endangered species and the Na Ala Hele trail system. We appreciate the input from the Department of Land and Natural Resources Division of Forestry and Wildlife (DLNR-DOFAW).

**Endangered Species.** Your concerns about State and Federally listed animals (Hawaiian hoary bat and Hawaiian goose (nēnē)) and seabirds are acknowledged.

No barbed wire is being planned for use as part of the project, so that should not be a concern for the Hawaiian hoary bat. The CDUA states that "The contractor would ensure that all trees would be surveyed for the presence of bats immediately prior to tree removal. If a roosting bat is present, the tree would not be removed until after the bat has left of its own accord."

Surveys for endangered birds are planned prior to ground disturbing activities (CDUA p. 25). As indicated in the Environmental Assessment for the proposed project, nēnē have never been recorded at Halepōhaku. However, nēnē will be added to the list of birds that are surveyed for. The CDUA already states that "If nēnē appear within 100 ft. of ongoing work, all activity would be suspended until the nēnē leave the area of their own accord."

The CDUA states that USFWS will be contacted if endangered species are present. The Office of Maunakea Management (OMKM) will also contact DOFAW if a nēnē nest is found. As indicated in the CDUA, "Nēnē are unlikely to nest in the area as they prefer to use the same breeding areas (and nests) year after year."

The potential negative impacts of artificial lighting on seabirds are acknowledged. As indicated in the best management practices (CDUA p. 41), "New lighting installed will be the minimum amount for safety and will be placed low to the ground. Lighting will be shielded and red to minimize impacts to wildlife and stargazing."

**Na Ala Hele.** Your concerns about traffic flow into the overflow areas below the project site are noted. OMKM and Maunakea Support Services (MKSS) have been working with DLNR-DOFAW and DLNR Division of Conservation and Resources Enforcement (DOCARE) staff to address ongoing parking concerns for the past several years.

OMKM, MKSS, DLNR-DOFAW Na Ala Hele representatives, and the project engineer met on-site on April 5, 2018 to discuss visitor use and parking patterns, along with ways to ensure resources are protected and agency missions met. Information on additional signs that Na Ala Hele and OMKM staff agreed are

appropriate for placement on University managed lands is being submitted to DLNR Office of Conservation and Coastal Lands (OCCL) for consideration as part of the CDUA review process. Per the April project walk-through, the traffic flow pattern will remain as proposed. OMKM and MKSS will continue to consult with DLNR-DOFAW and/or Na Ala Hele to assess the situation both on University managed and on adjacent Mauna Kea Forest Reserve lands, and to ensure adequate ATV/Motorcycle parking is available.

OMKM Rangers regularly communicate with DOCARE and Hawai'i County Police regarding compliance and violation concerns. DOCARE's concern about illegal activities will be shared with Ranger staff as soon as practical and with all MKSS and OMKM staff at the next staff training session in 2018.

OMKM had previously sought DLNR Site Plan Approval for a gate at the lower end of the parcel for traffic flow and related public safety purposes. DLNR denied the request pending review of the 2009 *Maunakea Comprehensive Management Plan* (CMP). OMKM will include this detail in the CMP review consultation process with DLNR and will work with Rangers and DOCARE staff to determine if this action may be safely achieved without additional DLNR permitting. A one-way traffic pattern, with vehicles exiting through R-1 is currently considered to be the safest traffic pattern for this area. Once the parking lot improvements are completed, OMKM and MKSS will work to eliminate traffic exiting through R-1.

We appreciate your input and participation in the subject CDUA.

Best,

A handwritten signature in black ink, appearing to read 'Kristin Duin', written in a cursive style.

Kristin Duin  
President

cc: Samuel J. Lemmo, Administrator, DLNR Office of Conservation and Coastal Lands  
Stephanie Nagata, Director, Office of Maunakea Management

February 21, 2018

To whom it may concern,

My name is Terrence Noda, I am a Hawaii Island resident, hunter, hiker and recreational trails rider (ATV and UTV) and frequent visitor to the Hawaii State Department of Forestry and Wildlife "DLNR" Hale Pohaku parking area. I utilize Mauna Kea access road and DLNR R-1 (road/trail that connects Hale Pohaku to Kilohana).

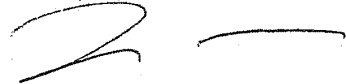
During the past year we have noticed an increase in vehicle and pedestrian traffic, especially in evening hours. The increased traffic; vehicle and pedestrian is unbelievable, nearly all of the traffic are visitors to the Onizuka Center. On one occasion my truck and trailer was blocked in by the overflow traffic and egress to R-1 was blocked by a triple row of parked cars. I had to wait 20 minutes for vehicles to move. Thankfully, the drivers for the vehicles were alerted to my UTV and truck and trailer lights, the Mauna Kea Rangers also came to investigate the occurrence.

When the Onizuka parking area is full, the current traffic routing for the center forces visitor onto DLNR road R-1. The current easement into the DLNR roadway eliminates parking in the designated parking area for Off Highway Vehicle trailers and trucks which is already limited. The other problem with the easement is when the Onizuka parking area is full the implied message to visitors is to park in the DLNR area which creates a potential for conflict with DLNR users who use the roadway or parking area.

I have been informed that your proposed plan increases parking to 50 stalls. The number of vehicles there on the night of the incident far exceeded 50 vehicles. To spend all the money on a facility that is already outdated should not be implemented unless there are other plans to mitigate the traffic and improve the paved roadway from Saddle road to Hale Pohaku. The increased vehicle traffic has also made the roadway from Saddle Road to Hale Pohaku unsafe. Due to increased traffic drivers decide to take un-necessary risks. Sometimes drivers in heavy fog overtake my truck and trailer on the steep declines. I have witnessed near head-on misses.

I am not opposed to any improvements however, given the limited resources that we must all share, the plan should consider the current needs and mitigation with other users who may be affected. Thank you for your time to read my comments.

Thank you,



Terrence Noda  
P.O. Box 492503  
Keaau, Hawaii 96749  
(808) 772-0234

May 23, 2018

Terrance Noda  
P.O. Box 492503  
Keaau, HI 96749

Re: Comments on Conservation District Use Application (CDUA) HA-3812 Infrastructure Improvements  
at Maunakea Visitor Center

Dear. Mr. Noda,

Thank you for your comments dated February 21, 2018 on the above referenced CDUA regarding your observations on traffic and parking conditions at the visitor facilities at Halepōhaku. The proposed improvements are intended to address some, but not all, of the existing traffic, parking, and safety concerns. OMKM acknowledges that the proposed project will not meet the entire current parking need, but the project was limited by available funds.

OMKM is working with DOFAW and Na Ala Hele to ensure adequate ATV/Motorcycle parking is available and to plan additional signage in the lower parking areas. In addition, once the parking lot improvements are completed, OMKM and MKSS will work to eliminate traffic exiting through R-1. Additionally, the Maunakea Administrative Rules, expected to be effective in 2019, will help manage the number of tour operators to ensure sustainable use of the area.

We appreciate your input and participation in the subject CDUA.

Best,

A handwritten signature in black ink, appearing to read 'Kristin Duin', written in a cursive style.

Kristin Duin  
President

cc: Samuel J. Lemmo, Administrator, DLNR Office of Conservation and Coastal Lands  
Stephanie Nagata, Director, Office of Maunakea Management



**Cain, Michael**

---

**From:** Kristin Duin <kduin@srgii.com>  
**Sent:** Monday, February 19, 2018 4:11 PM  
**To:** Cain, Michael  
**Subject:** FW: Previous email personal statement

FYI.

**From:** Page Else [mailto: ]  
**Sent:** Sunday, February 18, 2018 6:58 PM  
**To:** Kristin Duin <kduin@srgii.com>  
**Subject:** Previous email personal statement

I want to clarify that the opinions expressed in my previous email are totally my own opinions and observations as a Hawaii resident and lover of astronomy and culture and are not influenced by, and may differ from, any management agency or group.

On Feb 18, 2018 1:34 PM, "Page Else" <[pageelse@gmail.com](mailto:pageelse@gmail.com)> wrote:

I strongly support improvements to the parking infrastructure at the Mauna Kea Visitor Center. I am a Hawaii Island resident currently employed as an interpretive guide at the visitor center and my job duties include parking lot traffic direction.

I have seen first hand the unsafe conditions of our current temporary facilities which include: inability to separate pedestrian traffic from vehicle, traffic and pedestrian chokepoints at narrow points in the parking lot, inappropriate and dangerous speeding through the lot, dark conditions, lack of large signage and clarity to direct traffic flow towards exits, and high amounts of blinding dust from the unpaved gravel during wind events.

I view the parking lot as a microcosm of the current management problems on the mountain. While everyone is dancing around being oppositional or politically correct or lost in unclear beauracratc permitting processes, we have a serious on-going risk of human and vehicular injury.

The controversy over management on the mountain, especially on social media, has put the summit of Mauna Kea on visitors to do lists. This cannot be undone and tourists will still flock to the mountain regardless of services. Many people arrive in the parking lot saying "I want to go UP" with no understanding of the mountain beyond that. The visitor center plays a key role in safety briefings, building cultural respect and encouraging visitors with inadequate vehicles to not go further, and to not damage cultural sites.

Astronomy plays a vital role in Hawaii Islands economy and grows from the wayfaring traditions that brought Hawaiians here. Many places in the world, such as Chile, have capitalized on the growing interest in astro-tourism, linked to cultural history; and developed facilities to serve that interest and funding flow, but Hawaii has lagged behind. Mauna Kea is the premier site in the world for astronomy, as well as being a cultural site of vast importance across Polynesia. The visitor center program and it's infrastructure should also be world class and shared with Aloha.

Thank you for the opportunity to submit my comments.

May 23, 2018

Page Else  
[pageelse@gmail.com](mailto:pageelse@gmail.com)

Re: Comments on Conservation District Use Application (CDUA) HA-3812 Infrastructure Improvements at Maunakea Visitor Center

Dear. Ms. Else,

Thank you for your comments dated February 18, 2018 on the above referenced CDUA regarding your observations on traffic and parking conditions at the visitor facilities at Halepōhaku. The proposed improvements are intended to address some of the existing safety concerns. Additionally, the Maunakea Administrative Rules, expected to be effective in 2019, will help manage the number of tour operators to ensure sustainable use of the area.

We appreciate your input and participation in the subject CDUA.

Best,

A handwritten signature in black ink, appearing to read 'Kristin Duin', with a stylized, cursive script.

Kristin Duin  
President

cc: Samuel J. Lemmo, Administrator, DLNR Office of Conservation and Coastal Lands  
Stephanie Nagata, Director, Office of Maunakea Management

PHONE (808) 594-1888



**STATE OF HAWAII**  
**OFFICE OF HAWAIIAN AFFAIRS**  
560 N. NIMITZ HWY., SUITE 200  
HONOLULU, HAWAII 96817

FAX (808) 594-1865

RECEIVED  
OFFICE OF CONSERVATION  
AND COASTAL LANDS

2018 MAR -2 A 9 37

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

HRD18-6889 C

February 20, 2018

Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

Re: Comments on Conservation District Use Application HA-3812  
Infrastructure Improvements at Mauna Kea Visitor Center, Hale Pōhaku Mid-level  
Facilities  
Ka'ōhe Ahupua'a, Hāmākua Moku, Hawai'i Moku  
Tax Map Key: (3) 4-4-015:012

Aloha e Mr. Lemmo:

The Office of Hawaiian Affairs (OHA) has received your letter and compact disk containing a copy of a conservation district use application (CDUA, application) for infrastructure improvements at the Maunakea Visitor Information Station (VIS). Given the lack of information provided in the CDUA, OHA is concerned that the proposed project may negatively impact cultural resources that are known to exist in the project area. OHA requests additional information be included in the application prior to the public hearing on the application so that interested persons can provide informed testimony.

According to the CDUA, the project site is located within the 19.3-acre Halepōhaku parcel, which is leased to the University of Hawai'i by the Department of Land and Natural Resources under General Lease No. S-5529. The CDUA states that the Office of Maunakea Management (OMKM, the applicant) is proposing infrastructure improvements at Halepōhaku to address the increased number of visitors, to ensure safety of workers and visitors, and to prevent unintended impacts on natural, historic, and cultural resources.

Proposed improvements include removing one of two extant longhouse south of the VIS to provide space for a new 42-stall parking area (Parking Area 2), constructing Parking Area 2,

repaving and restriping portions of the existing VIS parking area (Parking Area 1), adding ingress and egress routes that facilitate traffic flow, paving an unimproved foot path to create a walkway connecting Parking Area 2 with the VIS, installing security gates at various access points to VIS parking areas, constructing a new greenhouse, and relocating one of four cabins located south of the longhouses to Parking Area 1. Drainage features will also be added.

OHA is concerned that the proposed project may negatively impact a lithic scatter (Site 10311), which is located within the project footprint. Based on the information provided in the CDUA, it is unclear if the extent of the site boundaries were identified, what the proposed site mitigation is, and if consultation pursuant to Hawai'i Administrative Rules (HAR) 13-275-6(c) and 13-275-8(a)(2) has been conducted.

According to the CDUA, Site 10311 is a component of the Pu'ukalepeamo Complex, a traditional Hawaiian tool quarry/workshop complex. The CDUA states that Site 10311 covered approximately 3,229 square feet and was the subject of data recovery in 1993, which yielded forty artifacts. A subsequent pedestrian survey was conducted in 2016 and is documented in a January 11, 2017 letter report included with the application. According to the letter report, two 1-meter test units were excavated during the 1993 data recovery. It is unclear if the extent of Site 10311 boundaries were determined during the data recovery. OHA is concerned that proposed ground disturbing activities may impact subsurface features and/or artifacts of Site 10311 that have not been identified.

The application does not state whether significance evaluations were conducted for Site 10311, or for Pu'ukalepeamo Complex, and whether consultation was conducted with native Hawaiian groups regarding site significance and mitigation in accordance with HAR 13-275-6(c) and 13-275-8(a)(2). OHA requests that the applicant provides information regarding significance evaluations of the site and whether consultation was conducted regarding the site's significance and the proposed mitigation.

The letter report states that five lithic artifacts were identified during the surface survey more than 15 meters to the east of the project footprint. OHA recommends that the CDUA explain the applicant's procedures for protecting these artifacts during construction. OHA also requests additional information regarding whether these artifacts are believed to be a part of the Pu'ukalepeamo Complex.

The CDUA states that a "qualified" archeologist will monitor all ground disturbing activities and that procedures detailed in the Long-Term Historic Property Monitoring Plan for the University of Hawai'i Management Areas on Mauna Kea (plan) will be followed. Because the plan was not provided with the application, it is unclear if the plan includes stipulations for construction monitoring. OHA recommends that the applicant clarify how they define "qualified archaeologist" and that the applicant make the plan available for review or include the relevant archaeological construction monitoring and site mitigation measures in the CDUA.

The CDUA also states that all project personnel will undergo a cultural and natural resource training provided by OMKM before performing work at the site and that any person not behaving in a manner consistent with principles established in the Maunakea User Orientation will be

Samuel K. Lemmo, Administrator  
February 20, 2018  
Page 3

required to leave the project site. The application states that a construction monitor will report any violations of contract, best management practices, or other issues that may impact natural and cultural resources directly to OMKM, and UH Hilo. OHA requests information regarding the content of the cultural resources training. OHA recommends that the application include information regarding whether this construction monitor will have the authority to remove personnel from a project site or to halt the project.

According to the Final Environmental Assessment (EA) for this project, SHPD determined no historic properties would be affected by the proposed project with implementation of the long-term monitoring plan.<sup>1</sup> The SHPD November 28, 2016 letter included with the EA, however, is in response to a County grading permit review and references only grading of a 1.42-acre area of TMK (3) 4-4-015:001 (por.). Please confirm that SHPD's no historic properties determination in its November 2016 letter applies to the entire project as described in the CDUA or if additional consultation with SHPD will be conducted.

Thank you for providing the opportunity to comment. We look forward to continuing consultation. Should you have any questions, please contact Teresa Kaneakua, OHA Lead Compliance Specialist, at (808) 594-0231 or [teresak@oha.org](mailto:teresak@oha.org).

‘O wau iho nō me ka ‘oia ‘i‘o,



Kamanaʻopono M. Crabbe, Ph.D.  
Ka Pōuhana, Chief Executive Officer

KC:tk

CC: Dr. Susan Lebo, SHPD Archaeology Branch Chief (*via email: [susan.a.lebo@hawaii.gov](mailto:susan.a.lebo@hawaii.gov)*)  
Sean Naleimaile, SHPD Hawaiʻi Island Archaeologist  
(*via email: [sean.p.naleimaile@hawaii.gov](mailto:sean.p.naleimaile@hawaii.gov)*)

---

<sup>1</sup> Sustainable Resources Group Intn'l, Inc. FINAL ENVIRONMENTAL ASSESSMENT: INFRASTRUCTURE IMPROVEMENTS AT MAUNAKEA VISITOR INFORMATION STATION 5 (2017) available at [http://oeqc2.doh.hawaii.gov/\\_layouts/15/start.aspx#/EA\\_EIS\\_Library/Forms/AllItems.aspx](http://oeqc2.doh.hawaii.gov/_layouts/15/start.aspx#/EA_EIS_Library/Forms/AllItems.aspx).

May 23, 2018

Kamana'opono M. Crabbe, Ph.D.  
State of Hawai'i  
Office of Hawaiian Affairs  
560 N. Nimitz Hwy., Suite 200  
Honolulu, HI 96817

Re: Comments on Conservation District Use Application (CDUA) HA-3812 Infrastructure Improvements at Maunakea Visitor Center

Dear Dr. Crabbe,

Thank you for your comments on the above referenced CDUA. We appreciate the input from the Office of Hawaiian Affairs (OHA). This letter provides some additional detail regarding the proposed project at Halepōhaku and potential impacts to cultural resources.

Communications with the State Historic Preservation Division (SHPD) regarding the proposed project began in December 2015. The existence of and data recovery from Site 10311 was discussed, as well as all project paving, including that within the data recovery area of Site 10311. As documented in the project Environmental Assessment (EA) on page 83, SHPD stated on November 28, 2016: “Based on current information, **SHPD’s determination is no historic properties affected**”. Based on follow-up communication with SHPD, the entire project was reviewed and the determination for the grading permit was to serve as the determination for the proposed action. SHPD was provided notice of the Draft EA and Final EA for review and comment; no comments were received. Per regulations, the Office of Conservation and Coastal Lands solicited comment on the CDUA from SHPD; no comments were received.

To ensure OHA comments and concerns were thoroughly addressed, OMKM engaged in additional consultation with SHPD in March and May of 2018. During this additional consultation SHPD upheld the determination of “no historic properties affected”, but realized they mistakenly applied the 2014 *Maunakea Archaeological Monitoring Plan* requirements when a project-specific archaeological monitoring plan (see HAR §13-279) is warranted in the event of an inadvertent discovery (see HAR §13-280). A project-specific archaeological monitoring plan has been developed for the proposed project and is currently under review by SHPD. The plan details protocols for monitoring and inadvertent discoveries. The plan includes information on previously recorded sites (10310 and 10311) within the project areas. Work would not commence until the plan has been approved by SHPD. As previously stated in the EA, an independent qualified archaeologist would be retained to monitor all ground disturbing activities for historic features such as artifact concentrations.

***Regarding Pu'ukalepeamo Complex and Site 10311***

Site 10311 boundaries were originally described in the 1985 McCoy report and updated with the 1991 McCoy report and 1993 data recovery project results (Hammatt and Shideler 2002). These reports are attached for your reference. A pedestrian survey conducted in 2016 did not identify any cultural materials within the project site nor within the known boundaries of Site 10311. As SHPD issued a determination in 2016 of “no historic properties affected”, new evaluations of site significance were not required.

The lithic artifacts identified in 2016 are not located within the project site, and no activities related to construction would occur in the areas where they are located. However, the on-site archaeologist would

be informed of their existence and location. A request for a determination about whether these artifacts are believed to be a part of the Pu'ukalepeamo Complex should be directed to SHPD.

***Regarding archaeological monitoring:***

As required by the *Maunakea Cultural Resources Management Plan*, archaeological monitoring will occur during all ground disturbing activities to ensure no surface or subsurface historic features are adversely affected. Prior to installation of the parking area and walkways, the first ground disturbing activity would be removal of plants with hand tools. This will provide an initial opportunity for the onsite archaeologist to determine if there are subsurface artifacts. As stated in the CDUA, per HRS Chapter 6E, all work would be suspended if possible or suspected historical features are encountered.

The Archaeology Branch of SHPD maintains an annually updated list of State of Hawai'i permitted archaeological firms. Permitted firms may be contracted to provide archaeological services for private individuals and public agencies. The monitoring program will be directed by a principal investigator qualified to conduct archaeological research in Hawai'i pursuant to HAR §13-281-3.

***Regarding construction monitoring:***

All construction requires an on-site construction monitoring as detailed in the BLNR-approved *Maunakea Comprehensive Management Plan* (CMP) Section 7.3.2 Construction Guidelines. "Construction guidelines for activities permitted under a CDUP are promulgated by DLNR and the County of Hawai'i. Permits issued by either DLNR, as part of the CDUP, or by the County, may require the development of an approved Best Management Practices (BMP) plan or identify safeguards to protect resources prior to authorizing construction activities. Protection of cultural resources is ensured through the development of a project-specific archaeological monitoring plan, as required by SHPD." Appendix B of the EA includes a Best Management Practices Plan that may be augmented but not reduced in terms of requirements.

The *Maunakea CMP Section 7.3.2, Construction Monitoring, "Management Actions"* details: "During all periods of construction (including, but not limited to, the delivery of construction materials to the site or to staging areas), there shall be on-site a construction monitor, whose responsibility shall be to monitor compliance with the terms and conditions of any CDUP as related to construction activities, as well as any terms and conditions agreed to between the constructing entity and OMKM.

The on-site construction monitor shall have the authority to order that any or all construction activity under a CDUP cease if and when, in the construction monitor's judgment, (a) there has been a violation of the terms or conditions of the CDUP that warrants cessation of construction activities, or (b) that continued construction activity will unduly harm natural or cultural resources; provided that the construction monitor's order to cease construction activities shall be for a period not to exceed seventy-two (72) hours for each incident. All orders to cease construction issued by the construction monitor shall be immediately reported to the Chairperson of BLNR and the OMKM. The Chairperson may issue a cease and desist order to extend the period of time that construction activity is prohibited, or such other order as the Chairperson deems appropriate.

The construction monitor shall be selected by the OMKM with the concurrence of the DLNR. The construction monitor shall have experience and be knowledgeable in construction management. Prior to assuming on-site duties, the construction monitor shall have completed the educational and training programs (cultural and natural resources orientation)."

***Regarding cultural resources training:***

The cultural and natural resources orientation was developed in consultation with and reviewed by Kahu Kū Mauna (Kahu Kū Mauna is a volunteer community-based council whose members are from the native Hawaiian community. Kahu Kū Mauna advises the Maunakea Management Board, OMKM, and the UH Hilo Chancellor on Hawaiian cultural matters affecting the UH Management Areas.).

The orientation is public, available online and in-person, and includes a feedback opportunity for all participants. According to OMKM records, OHA staff have indicated their attendance at the orientation. The orientation is a subject that OHA is encouraged to consult on with OMKM as that effort continues. The orientation can be viewed online at:

<https://docs.google.com/forms/d/e/1FAIpQLScywYvg59LmeeuiYoj72zgwZAniYIdHbZB23oXRyWz8cC-QAw/viewform>

We appreciate your input and participation in the subject CDUA. OMKM welcomes continued discussion with OHA regarding any concerns regarding this proposed project.

Best,



Kristin Duin  
President

cc: Samuel J. Lemmo, Administrator, Office of Conservation and Coastal Lands  
Stephanie Nagata, Director, Office of Maunakea Management

**Enclosures:**

McCoy, P. 1985. *Preliminary Archaeological Survey of the Pu'u Kalepeamoa Site, Mauna Kea, Hawaii*. Prepared for MCM Planning. Prepared by Bishop Museum, Dept. of Anthropology, Honolulu.

McCoy, P. 1991. *Survey and Test Excavations of the Pu'u Kalepeamoa Site, Mauna Kea Hawai'i*. Prepared for the University of Hawaii at Manoa Facilities Planning and Management Office. September.

Hammatt, H. and D. Shideler. 2002. *Data Recovery Report for Two Archaeological Lithic Scatters Sites 50-10-23-10310 and 50-10-23-10311 at The Pu'u Kalepeamoa Complex, Hale Pohaku, Ka'ohe Ahupua'a, Mauna Kea, Hawai'i Island (TMK 4-4-15:12)*. Prepared for The Institute of Astronomy, University of Hawaii. Prepared by Cultural Surveys Hawaii. March.





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

In Reply Refer To:  
01EPIF00-2018-TA-0140

March 19, 2018

Mr. Samuel J. Lemmo, Administrator  
Hawaii Department of Land and Natural Resources  
Office of Conservation and Coastal Lands  
P.O. Box 621  
Honolulu, Hawaii 96809

Subject: Technical Assistance for the Conservation District Use Permit Application HA-3812 for the Proposed Infrastructure Improvements at the Mauna Kea Visitor Center, Island and County of Hawaii.

Dear Mr. Lemmo:

The U.S. Fish and Wildlife Service (Service) received your correspondence on January 2, 2018, requesting review of a Conservation District Use Permit Application HA-3812 for the proposed infrastructure improvements at the Mauna Kea Visitor Center, TMK: (3) 4-4-015:012. The project area is in the Resource Subzone of the State Land Use Conservation District.

The proposed action includes: removal of one longhouse; a new means of ingress and egress for vehicles to the Visitor Information Station (VIS), including a new access lane and parking area and adjustments to existing VIS parking area 1; paving of an unimproved foot path to create a walkway connecting the new VIS parking area with the VIS; installation of four security gates; a new greenhouse; and relocation of one cabin. Drainage features would also be added. Project activities would occur on the University of Hawaii leased lands. Access to the project area would be through existing, approved access points identified in the Halepohaku parcel lease. The only portion that may overlap with lands managed by another entity is the portion where the new ingress/egress connects to Mauna Kea summit access road.

The Service offers the following comments to assist you in your planning process so that impacts to trust resources can be avoided through site preparation, construction, and operation. Our comments are provided under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, five listed animal species and one plant species may occur in the vicinity of the project area: the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Palila (*Loxoides bailleui*), Hawaiian petrel (*Pterodroma*

*sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), and the Mauna Kea silversword (*Argyroxiphium sandwicense* ssp. *sandwicense*).

The Service recommends the following measures to avoid and minimize project impacts to the following listed species:

## **Species Affected**

### **Hawaiian hoary bat**

The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet (ft) or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 ft above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend you incorporate the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 ft tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

### **Palila**

Hawaiian forest birds' current ranges are predominately restricted to montane forests (above 3,500 ft in elevation) due to habitat loss and threats at lower elevations. Hawaiian forest bird habitat has been lost due to development, agriculture, grazing, wildfire, and spread of invasive habitat-altering species. Forest birds are also affected by mosquito-borne diseases. Mosquitoes are not native to Hawaii; their occurrence increases in areas where ungulate presence results in small pools of standing water. Actions such as road construction and development increase human access and result in increased wildfire and invasive species threats. Grazing results in reductions in woody vegetation and increased grass cover, which reduces forest habitat quality and results in increased wildfire risk on the landscape.

Avoid conducting activities within forest bird habitat that:

- Promote the spread or survival of invasive species.
- Increase mosquito populations or stagnant water habitat.
- Increase wildfire threat to montane forest habitats.
- Remove tree cover during the peak breeding season between January 1 and June 30.

Vegetation clearing and construction activities will be avoided during the forest bird nesting season (February through July) to the extent possible. If it is not possible to avoid vegetation clearing or construction during these months, a nest survey will be conducted no more than 14 days before the start of the vegetation clearing or construction, and would include all areas within 500 ft of the construction area. Appropriate survey methodology (including avoidance and minimization measures in the event a nest occurs) will be coordinated with the Service.

**Hawaiian petrel, Threatened Newell's shearwater, and Band-rumped storm-petrel**

Hawaiian seabirds may traverse the project area at night during the breeding season (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Seabirds have been known to collide with fences, powerlines and other structures near colonies.

To avoid and minimize the likelihood of collision we recommend you incorporate the following applicable measures into your project description:

- Where fences extend above vegetation, integrate three strands of polytape into the fence to increase visibility.
- For powerlines, guywires and other cables, minimize exposure above vegetation height and vertical profile.

**Mauna Kea Silversword**

Cutting and removal of vegetation has the potential to alter microclimate, soil, pollution, fire, and wind conditions which may result in invasion of nonnative plants or reduction in germination, growth, and reproduction of listed plants. Activities such as grazing, use of construction equipment, and increased human traffic, can cause ground disturbance and soil compaction which decrease absorption of water and nutrients and damage plant root systems and may result in reduced growth and/or mortality of listed plants.

- Impacts to silverswords can be reduced by placing temporary fencing or other barriers around the footprint of the project. To avoid working in the habitat for silverswords, and drawing attention to the plants, the edge of disturbance should be fenced, not the nearby plant population.
- Given that the distance from the property line or project footprint to the silversword enclosure is less than 200 ft, it is very crucial that all project activities stay within the project boundaries and project footprint. This very close proximity stresses the importance of placing temporary fencing or other barriers around the footprint of the project so that no construction activities impact the silverswords. If impacts to silverswords are anticipated, please also consult with the Department of Land and Natural Resources - Division of Forestry and Wildlife.

## **Invasive Species Prevention**

The following biosecurity protocols are for preventing the movement or introduction of harmful invasive pests including coqui frog, little fire ant, noxious weeds, and other high-risk invasive species into project sites. It is the project leader's and contractor's responsibility to ensure compliance with these protocols:

- Vehicles, machinery, and equipment must be thoroughly pressure washed and visibly free of mud, dirt, plant debris, frogs and frog eggs, insects and other debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds.
- All work vehicles, machinery, and equipment may be subject to inspection.
- Any vehicles, machinery, and equipment that do not pass inspection will be turned away.
- All work vehicles, machinery, and equipment should be visually inspected for plant debris, insects, soil, frog (coqui) and frog eggs.
- Monitoring for invasive ants should be conducted throughout the project duration and continue upon its completion.
  - Invasive ants, such as little fire ant, can be monitored for by placing chopsticks baited with a dab of peanut butter and jelly throughout the site. These baits should be placed every 10-20 ft around the area, in the shade, and must be left out for 1 hour. The immediate surrounding areas should also be searched for ants. If the site area is extremely large, monitoring should occur in areas of higher concern for ant infestations.
  - Any ants found should be collected, bagged and labelled for identification. Infested areas will be sanitized following recommendations by the Hawaii Ant Lab (<http://www.littlefireants.com/>) or other ant control expert and in accordance with all State and Federal laws. Control records will be required to confirm treatment. Treatment is the responsibility of the site owner.
- Base yards and staging areas inside and outside of the site must be kept free of invasive pests.
- Base yards and staging areas may be inspected for invasive pests at the beginning of the project.
- Pest control records may be requested anytime.
- Project vehicles or equipment stored outside of a base yard or staging area, such as a private residence, should be kept in a pest free area. Such vehicles or equipment may be subject to additional inspection as described in above and will be turned away if infested.

If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats, and defines measures to minimize and mitigate those adverse effects.

Thank you for participating with us in the protection of our listed species. If you have any further questions or concerns, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-284-0037, e-mail: [eldridge\\_naboa@fws.gov](mailto:eldridge_naboa@fws.gov). When referring to this project, please include this reference number: ***01EPIF00-2018-TA-0140***.

Sincerely,

Michelle Bogardus  
Island Team Manager  
Maui Nui and Hawaii Island

Cc:  
DLNR-DOFAW: Emma Gosliner, Lyman Perry, and Steve Bergfeld

May 23, 2018

Michelle Bogardus  
Jodi Charrier  
U.S. Fish and Wildlife Service  
Pacific Island Fish and Wildlife Office  
300 Ala Moana Blvd., Room 3-122, Box 50088  
Honolulu, HI 96850

Re: Comments on Conservation District Use Application (CDUA) HA-3812 Infrastructure Improvements at Maunakea Visitor Center

Dear Ms. Bogardus and Ms. Charrier,

Thank you for your comments dated March 19, 2018 on the above referenced CDUA. It is important that the discussion on listed animal and plant species accurately reflect possible occurrence, potential impacts from project activities, and planned mitigations. The list of species that may occur in the vicinity of the project area is acknowledged. During informal Section 7 consultation for the Environmental Assessment (EA), the U.S. Fish and Wildlife Service (USFWS) requested that the analysis also include the threatened 'i'iwi (*Vestiaria coccinea*). All of these species are considered in the EA and the CDUA for this project.

The following responses address the USFWS recommended measures to avoid and minimize project impacts to listed species.

**Hawaiian hoary bat and palila.** An ongoing project, previously reviewed by both the Department of Land and Natural Resources Division of Forestry and Wildlife (DLNR-DOFAW) and USFWS, to document habitat use of native birds and bats has not documented breeding or nesting activity in the project vicinity. No palila or bat breeding or nesting activity has been observed in the project area during the past 30+ years of University tenure.

Since shrubs and trees will be cleared, and construction activities would occur during breeding and nesting periods, surveys for endangered birds and bats are planned prior to ground disturbing activities (CDUA p. 25). The CDUA states that USFWS will be contacted if endangered species are present, and that no tree removal would occur until the species has left on its own accord.

Other concerns for forest birds and bats include fires, mosquito-borne illness, and the presence of barbed wire fencing. The CDUA details both how the ignition of a wildland fire would be minimized and the response in the event of one. Given the nature of the project and the low amount of annual precipitation at Halepōhaku, mosquito habitat would not be created. The project does not include the installation of any fencing.

During informal Section 7 consultation for the EA, USFWS determined that negative impacts to palila from the proposed project are not anticipated.

**Seabirds.** The potential negative impacts of artificial lighting are acknowledged. As indicated in the best management practices (BMPs) (CDUA p. 41), "New lighting installed will be the minimum amount for safety and will be placed low to the ground. Lighting will be shielded and red to minimize impacts to wildlife and stargazing."

The current construction contract prohibits the use of any additional temporary night-time lighting, including security or safety lighting. Since night-time lighting is prohibited by contract, the construction phase would not pose an increased risk of fallout. If it becomes necessary to amend the construction contract to accommodate for some night work, none would occur during the fledging season (September 15 through December 15).

The project does not include the installation of any fences, above ground powerlines, guywires, or other cables that would potentially result in seabird collisions.

**Maunakea Silversword.** All project activities would occur within the University managed Halepōhaku parcel. The only Maunakea silversword plants in the vicinity are within the clearly marked enclosure on DLNR lands to the east, which is outside of the project site. The boundaries of the project site would also be clearly marked. Construction activities are not expected to impact the Maunakea silversword plants.

**Invasive Species Prevention.** Both the EA and the CDDA detail BMPs to prevent the introduction and spread of invasive species. All applicable prevention strategies detailed in the *Maunakea Invasive Species Management Plan* (Vanderwoude et al. 2015) and BMPs listed in Section 5 of the CDDA would be followed. This includes off-site inspections (below the Saddle Road junction) of large deliveries and equipment for the presence of invasive invertebrates. OMKM routinely surveys for and removes invasive species, should any be inadvertently missed.

It is not anticipated, and highly unlikely due to planned mitigation measures as well as the infrequent visitation of threatened or endangered species to the project site, that federally listed species would be adversely affected by the proposed project. Therefore, an Incidental Take Permit and associated Habitat Conservation Plan have not been pursued.

We appreciate your input and participation in the subject CDDA.

Best,



Kristin Duin  
President

cc: Samuel J. Lemmo, Administrator, DLNR Office of Conservation and Coastal Lands  
Stephanie Nagata, Director, Office of Maunakea Management  
Emma Gosliner, Lyman Perry, and Steve Bergfeld, DLNR-DOFAW

## **Appendix B: Modifications to Proposed Signage**






## Sign Plan for Halepōhaku, UH Management Area, Maunakea







OMKM, Maunakea Support Services, DLNR-DOFAW Na Ala Hele representatives, and the project engineer met on April 5, 2018 to discuss visitor use and parking patterns at Halepōhaku, with a focus on changes resulting from proposed infrastructure improvements. These changes are aimed at improving access and safety for visitors and workers by adding ingress and egress routes that facilitate traffic flow and building a new VIS Parking Area. Information on additional signs that Na Ala Hele and OMKM staff agreed are appropriate for placement on University managed lands are detailed on the attached exhibit, along with existing signage. The proposed sign changes will insure that resources are protected and agency missions met. Some signs are standard highway signs while others will be created specifically for this project. All signs will comply with applicable standards (e.g., *Manual on Uniform Traffic Control Devices for Streets and Highways*, HAR 13-5-22).<sup>1</sup>

### Existing Traffic-Related Signage (to remain):












Existing traffic-related signs to remain are included in the table below. Other existing traffic related signs will be removed. Building identification signs will remain.

Location	Sign	Rendering
Exit of the ingress/egress of VIS Parking Area 1	STOP	
Wall on the north side of VIS Parking Area 1	No Parking 3pm-close nightly [3]	TBD
Existing fully accessible parking spot in VIS Parking Area 1	RESERVED PARKING ♿ NO PARKING ACCESS AISLE	 


### New Signage:

Location	Sign	Rendering
New fully accessible parking spots in VIS Parking Area 1	RESERVED PARKING ♿ [2] NO PARKING ACCESS AISLE	 
Wall on the north side of the ingress/egress of VIS Parking Area 1 (northern side of the new Access Lane)	♿ → ← Exit Closed to all other vehicles after 3pm	 TBD
Gate at VIS Parking Area 1	Disability Parking Only after 3pm	TBD
Top of the VIS access lane, signaling that cars entering/exiting VIS Parking Area 1 have the right of way	STOP	
Top of the VIS access lane, indicating vehicles leaving VIS Parking Area 1 should not enter the new Access Lane.	DO NOT ENTER [2]	
Next to the exit lane of the new ingress/egress for VIS Parking Area 2 where vehicles enter the Maunakea Summit Access Road	STOP	

<sup>1</sup> <https://mutcd.fhwa.dot.gov/>

Location	Sign	
Junction of Maunakea Summit Access Road and the ingress/egress of VIS Parking Area 1	DO NOT ENTER [2]	
West side of the of the Maunakea Summit Access Road across from the ingress/egress of VIS Parking Area 1	VISITOR PARKING NEXT LEFT (signaling entry to VIS Parking Area 2 for vehicles traveling downslope)	TBD
Bracketing the lower and upper ends of Access Lane pull-out	 / Loading Zone Only [2]	
Southern entrance to the Access Lane	 ← ← ONE WAY	 
New fully accessible parking spot in VIS Parking Area 2	RESERVED PARKING  NO PARKING ACCESS AISLE	 
Northeast end of the VIS Parking Area 2	No Parking [2] Visitor Center ← (indicating that the walkway may be used to access the VIS)	 TBD
East side of the of the Maunakea Summit Access Road downslope (south) from the ingress/egress of VIS Parking Area 2	Parking → All Visitors Must Stop at Visitor Center	TBD
East side of the of the Maunakea Summit Access Road downslope (south) from the ingress/egress of VIS Parking Area 2	Interchangeable (flap) ROAD CLOSED sign (Type R11-2)	
On gate in VIS Parking Area 3 that segregates a small portion of the lot to be reserved for employee parking	DO NOT BLOCK <i>KEEP CLEAR AT ALL TIMES</i>	TBD
Southern end of the Construction Staging area, immediately adjacent to the Mauna Kea Forest Reserve	Leaving Visitor Center Parking	TBD

#### New Signage [painted on asphalt]:

Location	Sign
At the entrance to VIS Parking Area 2 (west side) to encourage visitors to use the new parking area	Parking
East side of the VIS Parking Area 2.	No Parking (along with striping)
On all fully accessible parking spots	 symbols
Directional arrows to direct traffic flow.	← →



