

UH Managed Lands - Project Proposal

For project anticipated to be classified as having "minimal impact"

Applicant Name: Maunakea Observatories Support Services

Project Name: Halepōhaku Construction Staging Area Gates and Vehicle Stops

Description: Install 2 pipe gates at the entrances/exit of the Halepōhaku construction staging area and delineate the staging area using 2-4 foot diameter rocks.

Identified Land Use: HAR §13-5-22, P9: Structures, Accessories (B-1) Construction or placement of structures accessory to existing facilities or uses. Accessory to original permitted parking area (structure) under HA-1819.

Tax Map Key: 3-4-4-15-12 (Halepōhaku)

Project Commencement Date: February 1, 2017

Project Completion Date: April 30, 2017

Estimated Cost: \$10,000

Total Size / Area of Proposed Use: Approximately 1/2 acre of existing gravel/cinder parking area.

Background

The gravel area below and west of four existing construction cabins located at Halepōhaku is used as a construction staging area and for the storage of supplies, materials and equipment for construction and maintenance activities. It is also used for the storage of road, snow removal, and other equipment used by Maunakea Support Services for road maintenance, snow removal and other maintenance operations. It is sometimes used as a staging area for emergency vehicles or landing site for helicopters. This area is often referred to as the Halepōhaku construction staging area.

In recent years the area is sometimes used by visitors and tour companies as overflow parking when other areas are full (typically for evening stargazing during periods of high visitation).

There is evidence (tire tracks) of vehicles leaving the designated parking area and driving on undisturbed areas which has the potential to unintentionally expand the impacted area.

Project Purpose and Need

The purpose of the project is:

1. To prevent damage to the resources by preventing vehicles from driving "cross-country" onto undisturbed areas.

2. To help ensure public safety by sectioning off heavy equipment, and construction and maintenance activities and preventing the public from wondering, driving or parking when the area is used for activities related to construction and maintenance.
3. To protect equipment/material in the storage area.
4. To provide storage area for construction materials reducing the amount needed to be stored on the summit.

Existing Conditions at Project Site

Geology, Climate, & Hazards: The Halepohaku staging area is located at the base of Maunakea's upper slopes at an elevation of 9,200 feet and has a semi-arid, sub-alpine climate. The proposed activity will only occur within an existing gravel/cinder area used for equipment and material storage, etc. described above.

Flora, Fauna, Ecology, Water Resources: No native flora inhabits the existing staging area affected by the proposed project. Regular invasive species monitoring of the project site is conducted by OMKM. No surface water resources are present.

Cultural Resources: The nearest historic property is approximately 120 ft away in the Mauna Kea Forest Reserve. No impact to historic properties is anticipated by placing curb stops along the perimeter and gates at the entrance/exit of the existing staging area.

Recreation: The staging area is sometimes used for overflow parking for the Visitor Information Station. When equipment and material are present, the parking area will be closed to the public. All other public parking areas will be unaffected.

Built Infrastructure: The project area is an existing cinder/gravel area is used for equipment/material storage and overflow parking for the Visitor Information Station. The proposed activity will be limited to areas that are already disturbed of pre-existing infrastructure.

Landscaping & Visual Conditions: The landscape consists of cinder and lava rock particles interspersed with clumps of vegetation. The proposed activity will not affect scenic views from the project area to surrounding areas, nor will the project affect views from surrounding areas.

Description of Project: Install 2 pipe gates (25' wide) at the entrance/exit of the staging area and delineate the perimeter of the staging area with 2-4 foot diameter rocks.

Describe the process of completing the project: Rocks 2-4 feet in diameter would be spaced about 2-feet apart along the perimeter of the staging lot to prevent passage of vehicles. Old power poles were considered for the project but not chosen as they contain wood preservatives and there is a concern about leaching into the environment. Rubber or concrete parking stops were considered but after discussing this option with

the Hawaii County Traffic Division, it was determined that vehicles can easily pass over them. Pipe gates will be installed to control access to the area.

Equipment/parts, include dimensions, quantities, composition, color, etc:

1) Perimeter Vehicle Stops: Rocks 2-4 foot in diameter that are currently stockpiled along the gravel summit access road would be placed on the edge of the staging area. See picture below showing existing rocks used for similar purposes along the road adjacent to Halepōhaku.



Examples of source of rocks to be used at Halepōhaku. Only rocks currently found in the road berm or road grader 'clean-out' areas will be used.



2) Pipe Gates

Two pipe gates will be mounted on 4-6" diameter steel support posts sunk about 36" into the ground and encased in concrete. Gates are comprised of two 12.5 ft long sections. Total width of the gate is approximately 25' wide. Center of the gates will be secured with 1-2" diameter posts that fit into 12" deep steel sleeves set into the roadway. The holes will be dug with a backhoe. See conceptual example below:



The map below shows the project location. The portion of the Staging area where rocks will be placed is outlined in red, existing visitor parking with wooden poles delineating parking in white and the two proposed gates are shown in green.

For Board Action



Workers/Transportation: MKSS Utilities staff will perform the work. Utilities staff will use a loader to move the rocks and a backhoe to dig holes for the gate-mounting poles.

Measures to Protect the Environment and/or mitigate Impacts

Protective Measures:

- Notify OMKM in writing at least 5 days prior to beginning field work on UH managed lands (Halepōhaku, Road Corridor, Maunakea Science Reserve, or Astronomy Precinct).
- All project participants must attend a Maunakea orientation *prior* to participating in field work.
- Allow OMKM Rangers to visit and monitor activities.
- Comply with all actions and measures described in the proposal, including (community) benefits, CMP compliance list, and mitigation measures.
- Ensure that loose tools or equipment are not left unattended and are properly stored at the end of each day.
- In preparation for high wind conditions (including verification that temporary and permanent infrastructure can sustain 120mph winds), protocols must include measures to ensure debris and equipment are not blown from the job site.
- All improvements shall be designed and installed to withstand the severe weather conditions on the mountain.
- Remove and properly dispose of all waste material. All perishable items including food, food wrappers and containers, etc. shall be removed from the site at the end of each day and properly disposed.
- Employ invasive species prevention best practices, including inspections of materials by a DLNR-approved biologist as appropriate prior to entering UH managed lands.
- Motorized equipment, when stationary, must have a drain-pan in place suitable for catching fuel or fluid leaks. To allow for expansion with reduced atmospheric pressure, fuel tanks should not be more than 3/4 full prior to transport to the summit (unless used as the fuel source for transport to the summit).
- Large, heavy, or oversized loads must submit notification to the Maunakea Road Conditions listserve at least one-day prior to delivery. Loads requiring an escort on public roadways must have this escort accompany them to the **final** destination. Projects failing to do so must obtain approval from the Maunakea Rangers before arriving at Halepōhaku or may be denied entry to Halepōhaku or above.
- Nēnē (*Branta sandvicensis*) may be present. If a nēnē appears within 100 feet (30.5) meters of ongoing work, all activity should be temporarily

suspended until the animal leaves the area of its own accord. Feeding of nēnē is prohibited.

- The approval may not be transferred or assigned. All persons associated with this project must carry a copy of the permit while they are working on University-managed lands.
- No use of mechanized equipment is allowed unless authorized by this permit.
- Identify and comply with other permit requirements, such as County of Hawaii building permits or Department of Land & Natural Resources (see both any applicable DLNR permit and [HAR §13-5-42 Standard conditions](#)).
- Placement of permanent: markers, monuments, mag nails, survey pins, etc. is not allowed without explicit prior approval from OMKM (and the State if required) for this purpose. ALL surveyors work must be shared with OMKM in digital format (i.e. CAD file as well as PDF) with coordinate info stored in and using a common, transferrable coordinate reference system such as “State Plane Coordinates (NAD83), Hawaii Zone 1”.
- Notify OMKM in writing when field activity associated with the project is completed.
- The project must be completed within the time frame specified in the proposal and (when applicable) DLNR approval. Projects not completed within this timeframe are not allowed to continue (or commence) without explicit, prior, written approval from OMKM.

Compliance with Lease, Sublease, or Comprehensive Management Plan (CMP):

The project addresses public and worker safety as well as lease compliance to avoid unintended impacts (expansion of parking area through increasing use).

Other required or associated permits: None

Five Year Outlook: This project was included in the 2017 - 2021 MKSS Five Year Plan and recommended for in-depth consultation.

Community Benefits

1. Increase public safety by separating construction equipment, and construction and maintenance activities from public activities.
2. Prevent environmental damage caused by vehicles going outside of designated areas at Halepōhaku.
3. Provide storage for construction materials at Halepōhaku, reducing the need to store items on the summit.

DLNR Evaluation Criteria:

1) The purpose of the Conservation District is to conserve, protect, and preserve the important natural and cultural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare. (ref §13-5-1) How is the proposed land use consistent with the purpose of the conservation district?

This project will allow equipment and material to be safely stored off the summit of Maunakea. The CSO telescope is currently initiating decommissioning planning and permitting. The UH-88 and IRTF telescopes both have maintenance projects that will soon begin. Rather than store equipment and material on-site at the summit, the designated staging area at Halepōhaku will be used. Gates at the entrance/exit of the area and 2-4 foot diameter rocks outlining the perimeter of the area will allow the area to be closed to public parking while material and equipment are being stored. This will also allow MKSS staff to close the staging area to public vehicles during maintenance activities and emergencies.

2) How is the proposed use consistent with the objectives of the Resource subzone of the land on which the land use will occur? (§13-5-13 The objective of this subzone is to ensure, with proper management, the sustainable use of the natural resources of those areas. This subzone shall encompass: lands necessary for providing future parkland and lands presently used for national, state, county, or private parks. Land suitable for outdoor recreational uses such as hunting, fishing, hiking, camping, and picnicking.)

This project will protect the local environment by helping to ensure vehicles and equipment and stored material remain in designated areas and equipment and material are stored away from the summit of Maunakea whenever possible. This project will also help prevent environmental damage to the resources by preventing vehicles from driving onto and through undisturbed areas.

3) Describe how the proposed land use complies with the provisions and guidelines contained in chapter 205A, HRS, entitled "Coastal Zone Management".

The project is not near nor hydrologically connected to the coast. Recreation resource use identified in the Coastal Zone Management chapter will be allowed to continue unaffected.

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

This project will not have an adverse impact as it is limited to the existing gravel/cinder staging area. It will prevent unintended impacts to undisturbed and natural areas by delineating appropriate storage, construction staging and parking areas.

5) Describe how the proposed land use, including buildings, structures and facilities, is compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.

The proposed land use will take place in an area that is already used for construction and maintenance activities, storage of construction materials,

and equipment and overflow parking. The proposed land use will help provide additional public safety measures and resource protection. The low profile ensures minimum visual impact while use of large rocks provides enough mass that the obstruction is visible even in low light conditions

6) Describe how the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon.

This project will allow equipment and material to be stored away from the summit of Maunakea whenever possible. The use of the staging area space will not change, but public safety concerns will be addressed.

7) If applicable, describe how subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.

No subdivision of land will occur.

8) Describe how the proposed land use will not be materially detrimental to the public health, safety and welfare.

The proposed action does not change the use. The project will define areas of appropriate use and is explicitly addressing safety concerns that affect public health, safety, and welfare during periods of potential conflicting uses.