



June 27, 2023

Dawn Takeuchi-Apuna
Department of Planning and Permitting
City and County of Honolulu
650 S. King Street, 7th Floor
Honolulu, HI 96813



Re: Application for an Amendment to Special Use Permit 2007/SUP-6 (LUC File No. SP73-147) (“**SUP**”) Makakilo Quarry—Tax Map Keys: 9-2-3-82; 9-2-3-74; and 9-1-16-4

Dear Director Takeuchi-Apuna:

On behalf of the applicant, Grace Pacific LLC (“**Grace Pacific**”), I respectfully submit the following items in connection with the Application for an Amendment to Special Use Permit 2007/SUP-6 submitted on behalf of Grace Pacific on February 1, 2023:

1. A copy of the Application for an Amendment to Special Use Permit 2007/SUP-6 (LUC File No. SP73-143) revised pursuant to communications with Brandon Soo, Community Planning Branch, Department of Planning and Permitting, Planning Division.
2. A check for \$15,000.00 representing the filing fee for the Special Use Permit Application.

The application and exhibits thereto have been revised to address each of the issues raised by Mr. Soo subsequent to the submission of the application as follows:

1. The Proposed Final Grading Plan (Exhibit I) has been revised to contemplate the connection of the Kunia berm to the slopes of Pu’u Makakilo, including the regrading of the site of the former golf house.
2. Section 2.5.2 of the application has been revised to include further detail and explanation of the Proposed Final Grading Plan.
3. The letter previously marked Exhibit M has been removed.

4. A map of the Special Use Permit Area applicable to the quarry has been included as Exhibit D-3.
5. The Exhibits have been renumbered accordingly.

Your consideration of this application is appreciated. Please contact me if you have questions or require additional information concerning this matter. We look forward to working with you and your staff.

Very truly yours,



Calvert G. Chipchase

for

CADES SCHUTTE

A Limited Liability Law Partnership

City and County of Honolulu
 DEPARTMENT OF PLANNING AND PERMITTING
 650 South King Street, 7th Floor
 Honolulu, Hawaii 96813

PLANNING DIVISION MASTER APPLICATION FORM

Additional data, drawings/plans, and fee requirements are listed on a separate sheet title "Instructions for Filing". **PLEASE ASK FOR THESE INSTRUCTIONS.**

All specified materials described in the "Instructions for Filing" and required fees must accompany this form; incomplete applications will delay processing. You are encouraged to consult with Planning Division staff in completing the application. Please call appropriate phone number given in the "Instructions for Filing".

Please print legibly or type the required information.

SUBMITTED FEE: \$ 15,000.00

PERMIT/APPROVAL REQUESTED (Check one or more as appropriate):

<input type="checkbox"/> GENERAL PLAN AMENDMENT	<input checked="" type="checkbox"/> SPECIAL USE PERMIT <u> </u> New <input checked="" type="checkbox"/> Modify Existing
<input type="checkbox"/> STATE LAND USE BOUNDARY AMENDMENT (<15 acres) From _____ (District) To _____ (District)	<input type="checkbox"/> ZONING DISTRICT BOUNDARY ADJUSTMENT, ADMINISTRATIVE
<input type="checkbox"/> DEVELOPMENT PLAN (DP)/SUSTAINABLE COMMUNITIES PLAN (SCP) AMENDMENT Indicate DP/SCP area _____	<input type="checkbox"/> ZONE CHANGE From _____ (District) To _____ (District) <input type="checkbox"/> AMEND UNILATERAL AGREEMENT TO ORDINANCE NO. _____
<input type="checkbox"/> PUBLIC INFRASTRUCTURE MAP REVISION (Indicate Map Symbol Request): <input type="checkbox"/> CY (Corporation Yard) <input type="checkbox"/> DSP (Desalination Plant) <input type="checkbox"/> D (Drainage Way (Open Channel)) <input type="checkbox"/> TS (Transit Station) <input type="checkbox"/> FS (Fire Station) <input type="checkbox"/> GB (Government Building) <input type="checkbox"/> GC (Golf Course) <input type="checkbox"/> P (Parks) <input type="checkbox"/> PS (Police Station) <input type="checkbox"/> PKG (Parking Facility/Transit Center) <input type="checkbox"/> RES (Water Reservoir) <input type="checkbox"/> SPS (Sewage Pump Station) <input type="checkbox"/> STP (Sewage Treatment Plant) <input type="checkbox"/> SW (Solid Waste Facility) <input type="checkbox"/> RTC (Rapid Transit Corridor) <input type="checkbox"/> R (Arterial & Collector Roadway) <input type="checkbox"/> W (Potable Well)	

(Project/Parcel specific information should be provided for General Plan and Development Plan amendments only if appropriate.)

TAX MAP KEY(S): 9-2-03: 74, 9-2-03: 82 9-1-01:4, 9-2-43:11 SUP: 9-2-03:74, 9-2-03:82 CUP

STREET ADDRESS/LOCATION OF PROPERTY: _____

APPLICATION/SUBJECT AREA (Acres/sq.ft.): 541 acres

THE PROPOSED PROJECT IS LOCATED INSIDE OUTSIDE THE:

- | | |
|---|---|
| <input type="checkbox"/> Urban Growth Boundary | <input checked="" type="checkbox"/> Community Growth Boundary |
| <input type="checkbox"/> Urban Community Boundary | <input type="checkbox"/> Rural Community Boundary |

OF THE Ewa Development Plan
 ZONING DISTRICT (S) Ag-2 Ag-1

DEVELOPMENT PLAN/SUSTAINABLE COMMUNITY PLAN
 STATE LAND USE DISTRICT: Agriculture

RECORDED FEE OWNER:

Name (& title, if any) Mr. Jerrod Schreck
 Organization Grace Pacific LLC
 Mailing Address 949 Kamokila Blvd.
Suite 200, Kapolei, HI 96707
 Phone Number 808-674-8383
 Signature Jel m. sch

APPLICANT:

Name Mr. Jerrod Schreck
 Organization Grace Pacific LLC
 Mailing Address 949 Kamokila Blvd.
Suite 200, Kapolei, HI 96707
 Phone Number 808-674-8383
 Signature Jel m. sch

PRESENT USE(S) OF PROPERTY/BUILDING:

Quarry, Open Space

AUTHORIZED AGENT/CONTACT PERSON:

Name Mr. Cal Chipchase
 Mailing Address Cades Shutte LLP
1000 Bishop St. Ste. 1200, Honolulu, HI 96813
 Phone Number 808-521-9200
 Signature Cal Chipchase

PROJECT NAME (If any): Makakilo Quarry
Expanded Operations

REQUEST/PROPOSAL (Briefly describe the nature of the request, proposed activity or project):

Modify SP73-147 to adjust boundaries, operating hours, and clarify language re: processing uses.

DPP/ELOG NO. _____

DPP/POSSE NO. _____

**APPLICATION FOR AMENDMENT TO SPECIAL USE PERMIT 2007/SUP-6
(LUC File No. SP73-143)**

MAKAKILO QUARRY

TAX MAP KEYS: 9-2-3-82; 9-2-3-74; AND 9-1-16-4

KAPOLEI, O‘AHU

**Grace Pacific LLC
949 Kamokila Blvd, Suite 200
Kapolei, HI 96707**

APPLICANT

**CADES SCHUTTE LLP
1000 BISHOP STREET, SUITE 1200
HONOLULU, HAWAII 96813**

AGENT

June 27, 2023

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1. BASIC INFORMATION

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949 Kamokila Blvd, Suite 200
Kapolei, HI 96707
(Makakilo Quarry)
- and
- Kapolei Infrastructure LLC
1001 Kamokila Boulevard,
Kapolei, Hawaii 96707
(Former Palailai Landfill)
- B. APPLICANT : Grace Pacific LLC
949 Kamokila Blvd, Suite 200
Kapolei, HI 96707
- C. LOCATION : Makakilo Quarry
Kapolei, HI 96707 (See Exhibit A)
- D. TAX MAP KEYS : 9-2-3-82 and 9-2-3-74 (Upper Makakilo Quarry); 9-1-16-4 (Lower Makakilo Quarry)
- Por. 9-2-43-11 (Former Pālailai Landfill)
- E. LOT AREA : 9-2-3-82 (175 ac.); 9-2-3-74 (312 ac.);
9-1-16-4 (54 ac.)
- F. ZONING : AG-2 (9-2-3-82; 9-2-3-74) and AG-1 (9-1-16-4)

2. APPLICANT'S SUMMARY

2.1 Grace Pacific LLC

Grace Pacific LLC (“**Grace Pacific**”) and its predecessor companies have served Hawai‘i for nearly 100 years. John and Walter Grace founded Grace Brothers, Ltd. in 1931, providing specialized equipment and materials to Hawai‘i’s construction industry. The company continued to grow and eventually represented more than 50 agricultural, construction and industrial equipment manufacturers, distributing its products throughout the Pacific. In 1973, Grace Brothers purchased a quarry at Nanakuli and began to supply paving materials, including hot-mix asphalt, crushed basalt, limestone and sand aggregate. In 1984, Grace Brothers acquired Pacific Concrete & Rock, the Makakilo Quarry and a ready-mix operator on O‘ahu, and renamed the combined operations Grace Pacific Corporation. This allowed Grace Pacific to further expand its production and supply of paving products.

Grace Pacific is a vertically integrated material supply company that supplies material from “rock to road.” Basalt rock is mined by Grace Pacific in the Makakilo Quarry, asphalt is produced by Grace Pacific in its hot-mix asphalt plant, transported by Grace Pacific to job sites and laid down at paving sites by Grace Pacific. Through acquisitions, including that of Hawaiian Bitumuls Paving & Precast Inc. in 2001, and its own work history, today’s Grace Pacific has built or maintained virtually all of the streets and highways in the state of Hawai‘i over the years, as well as many of the state’s airfield taxiways and runways. Recent projects on O‘ahu include preventive maintenance work on Kamehameha, Farrington, H-3, and Nimitz Highways as well as projects on the windward and central sections of the Pali Highway, among others. On Maui, Grace Pacific operates as Maui Paving LLC, a joint venture with Goodfellow Brothers, Ltd. On the Big Island, Grace Pacific worked on Saddle Road and has been involved with numerous large projects on Queen Ka‘ahumanu Highway. On Kaua‘i, recent projects include Kūhiō Highway reconstruction and complete streets projects. Grace Pacific, either directly, or through its partners, supplied each of these projects and many others with aggregate, hot-mix asphalt, or ready-mix concrete.

2.2 The Makakilo Quarry

The Makakilo Quarry is located on the southern slopes of Pu‘u Makakilo in the ‘Ewa, District of O‘ahu, Hawai‘i. The quarry began operating in 1973. It is one of three remaining quarries on the island of O‘ahu. The Makakilo Quarry plays a vital role in providing O‘ahu with local sources of basalt aggregate. Specialty products from the Makakilo Quarry are also shipped to neighbor islands from time to time as required for statewide projects. Basalt rock is mined in the quarry and processed into aggregate, which in turn is sold as structural fill. A-grade finished products are used in both ready-mix concrete and hot-mix asphalt. B-grade finished products and general fill are often used as structural fill under homes and highways. The quarry was acquired by Grace Pacific in 1984.

The quarry and ancillary operations are presently conducted under permits 2007/CUP-91 (the “**Conditional Use Permit**”) and 2007/SUP-6 (LUC File No. SP73-147) (the “**Special Use Permit**”). See Exhibit B (DPP Order granting 2007/CUP-91); Exhibit C (LUC Order granting SP73-147). The parcels affected by the Special Use Permit are described as Tax Map Keys (“**TMKs**”): 9-2-3-82 (“**Parcel 82**”), 9-2-3-74 (“**Parcel 74**”), and 9-1-16-4 (“**Parcel 4**”). Exhibits D-1 and D-2 (Parcel Maps). The Special Use Permit Area applicable to the quarry is depicted in Exhibit D-3. The Conditional Use Permit is applicable to Parcels 74 and 82.

Parcel 74 contains the existing quarry excavation area and a portion of the existing buffer zone. Parcel 82 contains the existing processing area, which includes equipment, maintenance, parking, crushing, screening, and recycling operations. Exhibit E (Existing Conditions). The processing area also includes a ready-mix concrete batching plant, which is operated by HC&D LLC. Parcels 74 and 82 are located mauka of the H-1 Freeway. Parcel 4 is located makai of the H-1 freeway and is the former site of the processing area. All processing operations on Parcel 4 were ceased by the end of 2012. Parcel 4, Parcel 74, and Parcel 82 are owned by Grace Pacific.

2.3 Former Pālailai Sanitary Landfill

The former Pālailai Sanitary Landfill is situated at Pu‘u Pālailai and is located on a portion of parcel TMK: 9-2-43-11 on approximately 42 acres of land. The landfill stopped accepting solid waste in 1988 and began the closure process shortly thereafter. The landfill site is owned by Kapolei Infrastructure, LLC, a subsidiary of the James Campbell Company, LLC, and is leased to Grace Pacific. Grace Pacific is not seeking a modification of the Special Use Permit with respect to the former Pālailai Landfill in this application. The lease of the landfill site expires in 2032.

2.4 Special Use Permits and Conditional Use Permits

Initial quarry operations were permitted in 1973 under Special Use Permit 72/SUP-1 (LUC File No. SP73-147) and Conditional Use Permit 72/CUP-2. The permits authorized the establishment of mining, blasting and crushing activities on Parcels 74 and 82 and various ancillary uses on Parcel 4, including a concrete batching plant, shop, stockpile areas and an office.¹

On October 5, 2007, Grace Pacific filed an Application to Modify Conditional Use Permit (Major) 72/CUP-15 and Special Use Permit No. 72/SUP-1 (LUC File No. SP73-147) with the City and County of Honolulu, Department of Planning and Permitting (“**DPP**”). Grace Pacific sought to obtain approval to expand the excavation area and extend the life of the Makakilo Quarry resource extraction aggregate processing, manufacturing of asphaltic concrete and concrete and asphaltic pavement recycling operations to the year 2032. The proposed expansion involved the excavation of rock

¹ The permitting history of the quarry is further described in section 4, *infra*.

from sources further up the slopes of Pu‘u Makakilo. The Planning Commission, on docket number 2007/SUP-6, approved the modification of the Special Use Permit subject to 14 conditions.

On November 7, 2008, the LUC adopted the Planning Commission’s approval of the application subject to the 14 conditions recommended by the Planning Commission and 2 additional conditions. The conditions in the LUC’s order that are relevant to this application are as follows:

DECISION AND ORDER

...

3. All resource extraction, related aggregate processing and concrete and asphalt production activities, including recycling activities shall cease by December 31, 2032. Final beneficial re-use plans as approved by the Department of Planning and Permitting shall be implemented immediately upon the cessation of said resource extraction and related quarrying activities.

4. The Applicant shall close the processing site on Parcel 4 by relocating all uses on the site into the quarry pit or Campbell Industrial Park by December 31, 2012, and Parcel 4 shall be returned to landscaped open space use within six (6) years of the date of the Land Use Commission's Decision and Order. A landscape plan shall be submitted to the Director of Planning and Permitting for review and approval on the second anniversary date of the Land Use Commission’s Decision and Order and the approved landscape plan shall be implemented within one (1) year of its approval. Landscaping shall be maintained in a natural state for the life of the Special Use Permit.

5. Beginning January 1, 2012, quarry operations shall be limited to the following days/hours:

a. Quarry excavation, crushing, stockpiling, equipment maintenance, and recycling facility - 6:00 a.m. to 6:00 p.m., Monday to Saturday.

b. Hot-mix asphalt plant - 6:00 a.m. to 6:00 p.m., Monday to Friday

c. Unloading of cold-planed asphaltic concrete during re-paving jobs- 6:00 p.m. to 10:00 p.m., Sunday to Friday.

6. Except for quarry, recycling activities in the quarry, and renaturalization activities, the remainder of Tax Map Key: 9-2-03:74 shall remain in open space buffer for the life of the quarry and related activities. Minor accessory uses or structures may be permitted on Parcel 74 with the express written consent of

the Director of Planning and Permitting. Any other uses shall be processed pursuant to Section 205-6, Hawai'i Revised Statutes.

...

15. The uses in the quarry excavation area shall be limited to rock excavation, crushing, stockpiling, a new hot-mix asphalt plant, recycling of concrete rubble, glass, and asphaltic concrete pavement, equipment maintenance, employee support, parking, administration, and a water well and pump. No other uses shall be permitted without the approval of the Land Use Commission.

Exhibit F (the “**2008 LUC Order**”).

In addition, Condition 10 to the 2008 LUC Order requires that Grace Pacific submit to DPP a beneficial reuse plan for land disturbed by quarry operations and regular updates to said plan. The beneficial reuse plan is intended to outline future land use alternatives when quarry operations cease within the SUP area. The most-recent update to the beneficial reuse plan is dated August 31, 2022. It contemplates two scenarios for re-use. The first scenario is re-use based on existing land use classifications and contemplates four potential uses: (1) renaturalization; (2) active and passive recreation; (3) agriculture; and (4) a photovoltaic energy facility. The second scenario is re-use based on a change in land use entitlements and contemplates potential urban use consistent with adjacent Transit Oriented Development.

In summary, and of relevance to this application, the 2008 LUC Order (1) approved the extension of the Special Use Permit to 2032; (2) provided that the processing and ancillary uses on Parcel 4 would need to be relocated to the upper quarry (Parcels 74 and 82) or Campbell Industrial Park by the end of 2012; and (3) restricted the operating hours for the processing activities conducted in the upper quarry. The 2008 LUC Order also approved the expansion of the excavation area as noted in the Findings of Fact, Conclusions of Law, and Decision and Recommendation of the Department of Planning and Permitting, dated August 13, 2008. Exhibit F at 29, Ex. A.

On July 17, 2009, DPP issued its Findings of Fact, Conclusions of Law, and Decision and Order regarding the Application to Modify the Conditional Use Permit under File No. 2007/CUP-91 (the “**2009 DPP CUP Order**”). Much like the 2008 changes to the Special Use Permit, DPP approved a new Conditional Use Permit to allow resource extraction, recycling of concrete and cold-planed asphalt, operation of a hot-mix asphalt plant and other uses and structures through the year 2032. The 2009 DPP CUP Order also placed identical restrictions on the quarry operating hours and provided that the processing uses on Parcel 4 would be relocated by the end of 2012.

2.5 Proposed Amendments

By filing this application to amend the Special Use Permit to (1) extend the life of the Makakilo Quarry resource extraction, aggregate processing, manufacturing of asphaltic concrete, concrete batch plant operations, and concrete and asphaltic pavement recycling operations by 15 years to the year 2047; (2) reshape the permitted area approved for mining in order to target a seam of high-quality rock by adding 15.6 acres to the existing footprint and removing the same acreage from another section of the existing permitted area; (3) expand the operating hours of certain activities in the quarry to 24 hours a day, seven days a week; and (4) to confirm that a ready-mix concrete plant is permissible in the quarry pit. Upon approval of this application, Grace Pacific intends to submit an application seeking identical modifications to the Conditional Use Permit.

2.5.1 Extending the Life of the Makakilo Quarry Resource Extraction, Aggregate Processing, Manufacturing of Asphaltic Concrete, Concrete Batch Plant Operations, and Concrete and Asphaltic Pavement Recycling Operations to the Year 2047

Grace Pacific proposes to amend the Special Use Permit to extend the permit until the year 2047. This request is based on Grace Pacific's estimate that, as of 2018, between 14.32 and 15.51 million tons of aggregate existed in the current permitted excavation area of the quarry. Based on current market demand, Grace Pacific estimates that if the permit extension is granted, it will exhaust the reserves in the current permitted area between 2040 and 2042. In addition, if the reshaping of the permitted area is granted, Grace Pacific estimates that the new proposed area contains approximately 12,845,000 tons of additional aggregate, which would be exhausted by 2047. Actual aggregate consumption per annum varies according to market conditions, and resource extraction rates will be affected by the amount of recycling activity at the quarry. Recycling efficiency is expected to increase in the coming decades, which could reduce the rate at which new material is excavated, further extending the life of the resource.

2.5.2 Reshaping the Permitted Area Approved for Mining.

Grace Pacific proposes reshaping the permitted area approved for mining to better reflect available resources by adding 15.6 acres to the existing footprint along the northwestern and western rim of the quarry pit and by removing the same acreage from the existing permitted SUP area along the northern and southwestern rim of the quarry pit. This is to access a seam of high-quality rock for use in the manufacturing of concrete and asphalt paving products. The proposed change to the permitted

mining area is depicted in Exhibit G-1 (Map of Proposed Reshaped Area).² This would result in no net change to the size of the permitted area and would result in a net increase in linear distance of area reserved as a “buffer” from the surrounding community.

A proposed Final Grading Plan is attached hereto as Exhibit I. The proposed Final Grading Plan contemplates a slimmer berm on the eastern rim of the quarry (sometimes referred to as the “Kunia berm”) upon closure of the quarry. As discussed in greater detail in section 7.2.1, *infra*, Grace Pacific anticipates that the view of the disturbed portions of the slopes of Pu’u Makakilo will be mitigated through the utilization of a slimmer Kunia berm, while at the same time maintaining an overall natural look of the hillside upon closure.

The following is a comparison of the grading/site work related requirements set forth in the SUP and CUP followed by a discussion of the relevant parameters of the proposed plan:

Depth

In paragraph 22 of the Findings of Fact in the 2008 LUC Order, the LUC noted that “[t]he Applicant plants to excavate as deep as 200 to 250 feet below the existing grade to maximize extraction of known basaltic reserves.” Exhibit F.

There are no changes to this commitment under the proposed plan. The proposed grading plan contemplates excavation no deeper than 245 feet below existing grade.

Slopes

Paragraph 40 of the Findings of Fact in the 2008 LUC Order provides that “Post-quarry operations also include the incorporation of final landforms that will have slopes no greater than 75 percent to promote long-term soil retention and landscaping.” Exhibit F.

² At the request of the Department, Grace Pacific has also included as Exhibits G-2 and G-3 maps comparing the boundaries set forth in the 2010 site plan submitted to the Department to (1) aerial imagery from the quarry taken in 2022 (G-2) and (2) the proposed reshaped mining area (G-3). The area outlined in red on Exhibit G-1 delineates the “toe” of the slope of the approved mining area. This is made clear by comparing the 2010 site plan to the 2032 Closure Grading Plan attached as Exhibit 8A to the August 13, 2008 Director’s Report and Recommendation for Approval in docket 2007/SUP-6. Exhibit H-1 (Closure Grading Plan submitted with 2007 SUP amendment application). Exhibit H-2 compares the boundaries of the 2010 site plan, the current quarry configuration, and the limits of the 2032 Closure Grading Plan.

The proposed closure grading plan proposes shows the same overall average quarry wall slopes (1.7:1) as the existing plan. The proposed plan would allow for slopes steeper than 1.7:1 in some limited areas where the material is harder and would be stable. Hard, stable materials would not be prone to erosion. Softer materials prone to erosion would be renaturalized with vegetation. The natural areas around Pu'u Makakilo are comprised of mixed hard rock and vegetated soils. The proposed plan would create a mixture of slopes and ground textures similar to existing surrounding ground conditions and would help to blend quarry areas into undisturbed surrounding hillsides.

Screening Berms/Golf Clubhouse Site

Paragraph 40 of the Findings of Fact in the 2008 LUC Order also contemplates screening berms and regrading of portions of the former golf course as follows:

The Applicant's Closure Grading Plan dated June 5, 2008, calls for (1) a screening berm of up to 40 feet above finish grade and extending from the quarry pit access road to an elevation of 725 feet along the northern ridgeline; (2) a smaller berm between the quarry pit and the H-1 Freeway; and (3) renaturalization of grades of the former golf course driving range located in the upper valley of Pu 'u Makakilo to replicate conditions that existed prior to the mass grading for the golf course.

Exhibit F.

There are no changes to the smaller berm under the proposed plan.

The screening berm along the northern ridgeline is still contemplated under the proposed plan but on a smaller area of land. Under the proposed plan, the berm would still rise to the height of the approved berm (725 feet) and would serve to screen quarry walls from a westward perspective. The proposed berm extends from just above the quarry pit access road to the 690 elevation. The site of the former golf clubhouse will still be regraded and blended into the hillside under the proposed plan. The visual simulations prepared for the application confirm that the berm as proposed would screen views of the quarry walls looking from east to west. *See Exhibit P (View Planes Analysis).*

Storm Drainage

Paragraph 45 of the Findings of Fact in the 2008 LUC Order provides:

The Applicant prepared an Engineering Report dated April 2007 that addresses drainage requirements, regrading, and revegetation upon completion of resource extraction activities. The Applicant proposes to retain all storm water runoff that drains into the quarry pit with three existing drainage basins

that have been designed for a 100-year storm event. The quarry expansion is not anticipated to have adverse impacts on adjacent properties and existing drainage systems downstream of the Property. If required by the DPP, the Applicant must submit an update of the drainage plan for the DPP's review and approval as a result of modifications to the final.

Exhibit F.

Under the proposed grading plan all storm water would continue to be retained on site by detention basins, a cut off swale/detention basin along the top of the site to intercept off site runoff, and benched terraces which will act as cutoffs and small detention areas for storm water flowing across the quarry faces. The engineering report would be revised to reflect the proposed plan.

Visual Impacts

Paragraph 38 of the Findings of Fact in the 2008 LUC Order provides "Pu'u Makakilo is part of the proposed Open Space and Greenways Network and is intended for preservation and enhancement as a visual landmark and as part of a significant vista from Kapolei." Exhibit F. Paragraph 40 of the 2008 LUC Order also provides "[u]nder the plan, there are no vertical cuts, horizontal benches, or exposed rocks. The Applicant intends to implement the final closure grades as represented in its Closure Grading Plan dated June 5, 2008." Exhibit F.

The proposed grading plan was used to prepare the computer-generated visual simulations submitted hereto in Exhibit P. These simulations show that the conditions created by the proposed plan coupled with renaturalization plantings, would create an appearance in the character of the surrounding hillsides and Pu'u Makakilo. Renaturalization plantings will have the same textures and colors as existing plants. Intermittent exposed rocks amongst the vegetation would not be different in appearance from the exposed rocks and rock shelves that currently exist in surrounding areas. In addition, although the proposed plan contains benches, the benches would not be perceived from critical view points below and they further support the viability of the quarry by facilitating, and making more efficient, quarrying activities. Benches would be a maximum height of 50 feet, with the flat areas atop them being a maximum width of 15 feet. The existing plan does show benches along the makai quarry faces. The proposed plan would carry similar benches around the perimeter of the quarry on all faces.

Grading

The 2009 DPP CUP Order provides "[t]he applicant shall stabilize exposed soils during the construction of any berms to minimize runoff impacts to the area's natural drainage features. Landscaping of any berms shall commence within 30 days of completion of berm construction." Exhibit B at 22.

The slopes created by the proposed plan will be promptly revegetated and stabilized according to this requirement. The slopes shown in the grading plan will provide a stable base for long term vegetation growth.

Plans

The current plan applicable to the quarry is the Makakilo Quarry Closure Grading Plan, dated June 5, 2008. Exhibit H-1.

The proposed plan reflects the revised quarry boundary and would replace this approved plan.

2.5.3 Expanding the Hours of Operation for Certain Quarry and Processing Activities

In addition, Grace Pacific proposes to expand the operation hours of the production of hot-mix asphalt and ready-mix concrete, sales, maintenance and the receiving of permitted recycle materials on Parcel 74 and Parcel 82 to 24 hours a day, seven days a week, to better meet market demand for these products in a more efficient manner. The proposed expansion of operating hours would not apply to blasting or excavation activities in the quarry. The proposed changes in operating hours are summarized in Table 1 in section 5.4, *infra*.

2.6 Confirmation that a Ready-Mix Concrete Plant Is Permissible in the Quarry Pit.

Finally, Grace Pacific proposes a modification of the permit to confirm that a ready-mix concrete plant is permissible in the quarry pit. The 2008 LUC Order provided that processing uses previously on Parcel 4 would be relocated to the Campbell Industrial Park *or* the quarry pit. One such processing use located on Parcel 4 at the time of the 2008 LUC Order was a ready-mix concrete plant. Because the 2008 LUC Order provided that the processing uses on Parcel 4 would be relocated to the Campbell Industrial Park or the quarry pit, the 2008 LUC Order permits the operation of a ready-mix concrete plant within the quarry pit.

Notwithstanding, Grace Pacific includes the ready-mix concrete plant in the instant application in order to make clear that it is an approved use under the Special Use Permit.

2.7 Justification for Proposed Amendments

2.7.1 Extension of the Life of the Permit to the Year 2047

It is estimated that, in 2017, the total aggregate consumption for the island of O'ahu was 4.875 million tons. In the same year, O'ahu's construction demand was for approximately 650,000 cubic yards of ready-mix concrete and 985,000 tons of hot-mix

asphalt. Both ready-mix concrete and hot-mix asphalt are manufactured using A-Grade basaltic aggregate and other components.

The Makakilo Quarry is one of three remaining quarries on the island of O‘ahu and supplies approximately 800,000 to 1,000,000 tons of aggregate per year. The remaining quarries are the Hālawā Quarry, which is operated by Hawaiian Cement and the Kapa‘a Quarry, which is operated by Honolulu Construction and Draying Co., Ltd. The Hālawā Quarry’s permit expires in 2026, and the Kapa‘a Quarry’s permit expires in 2052, though its reserves are expected to deplete before permit expiry.

It is estimated that as local aggregate reserves are exhausted, aggregate will need to be imported to satisfy demand. In 2017, approximately 75,000 tons of aggregate was imported from Maui and approximately 150,000 tons of aggregate from quarries in British Columbia, Canada. The increase in the cost of ocean freight and handling, the increased congestion at Hawai‘i’s harbors and the risk of reliance on long-distance shipping makes imported aggregate a second choice to locally quarried aggregate. See Exhibit Y at 21-23.

The Makakilo Quarry plays an important role in supplying local aggregate to O‘ahu. The quarry is in a centralized location and, therefore, is able to supply aggregate and aggregate products to job sites while incurring less transportation costs than the other local quarries and imported aggregate sources. The quarry also is permitted for a concrete rubble and asphalt pavement recycling operation under Zoning Variance 2002/VAR-51 and Solid Waste Management permit RY-0063-16, which helps to alleviate demand by recapturing and recycling aggregate removed from existing projects.

In 2019, Grace Pacific retained North American Reserve to conduct a study to determine the total volume of rock reserve remaining in the permitted excavation area. It estimated aggregate reserves, as of November 2018, in the current excavation area as follows:

A-Grade Aggregate	B-Grade Aggregate	Cinder	Overburden
10.15–10.79 million tons	4.17–4.72 million tons	2,156,000	209,000

Based on these estimates and current market demand, Grace Pacific anticipates that reserves in the current excavation area could continue to provide a local source of aggregate until between 2040 and 2042.

2.7.2 Proposed Reshaping of the Permitted Mining Area

The reshaping of the excavation area is necessary to target a seam of high-quality rock that Grace Pacific’s quarry operators have identified based on their experience working within the excavation area. Grace Pacific estimates that the new portions of the excavation area in the proposed reshaped excavation area contain approximately 5,500,000 tons of A-Grade aggregate and 7,345,000 tons of B-Grade aggregate. By contrast, Grace Pacific estimates the areas that it proposes to remove from the permitted excavation area more likely than not to contain lower quality B-Grade Rock and overburden. Exhibit J (Grace Pacific’s Aggregate Estimates). Accordingly, reshaping the excavation area would allow Grace Pacific to target a higher quality seam of rock while preserving the same overall size of the approved excavation area. It also has the net effect of increasing the linear distance between the approved excavation area and the surrounding community. Considering these additional reserves, plus the recycling benefits described above, Grace Pacific anticipates that the quarry could continue to provide a local source of aggregate until 2047.

2.7.1 Proposed Placement of a Ready-Mix Concrete Plant on Parcel 82 and Expansion of Operating Hours

The placement of a ready-mix concrete batching plant and the expansion of the operating hours for the production of hot-mix asphalt and ready-mix concrete, sales, maintenance and the unloading of permitted recycle materials to 24 hours a day 7 days a week would allow Grace Pacific to better meet O’ahu’s demand for ready-mix concrete and hot-mix asphalt with less impact on O’ahu’s roads and at reduced costs. In order to avoid the impact of roadwork on public traffic, approximately 50 percent of City and County of Honolulu (“City”) paving work supplied by the Makakilo Quarry occurs between 6:00 p.m. and 6:00 a.m.—outside of the permitted operating hours of the quarry—to minimize impact on traffic. Both ready-mix concrete and hot-mix asphalt must be utilized within a narrow timeframe after processing. It is therefore necessary to manufacture hot-mix asphalt and ready-mix concrete beyond existing operating hours of 6:00 a.m. to 6:00 p.m., so that the product is available for these paving jobs.

In order to meet current demand and comply with the current operating hour restrictions imposed by the Special Use Permit and Conditional Use Permit, Grace Pacific operates a 24-hour hot-mix asphalt plant at a site in Kalaeloa. Grace Pacific leases the Kalaeloa site, resulting in additional cost to produce the asphalt. In order to manufacture hot-mix asphalt during night hours, aggregate from the quarry is loaded into dump trucks during quarry operating hours and transported to the Kalaeloa site for processing at a time closer to the time of the paving or construction job. The hot-mix asphalt is then trucked from the Kalaeloa site to the ultimate paving or construction job site. The cost of utilizing dump trucks to haul aggregate to the processing plant is approximately \$150 per hour per truck.

Similarly, aggregate from the quarry that is intended to be processed into ready-mix concrete during night jobs is purchased during operating hours in the quarry pit by customers, loaded into dump trucks, and transferred to offsite processing facilities where the aggregate is processed into ready-mix concrete closer to the job time before being eventually transported to worksites.³

Requiring aggregate to be transported offsite for processing into ready-mix concrete and hot-mix asphalt for use in night jobs (1) results in dump truck traffic between the quarry and processing sites; (2) results in additional costs to lease and transport aggregate to offsite processing facilities; (3) incurs costs in maintaining offsite processing facilities; and (4) often results in a further increase in costs to transport the finished product to worksites because processing sites are typically located in less-centralized locations than the quarry. These added costs ultimately drive up the cost of the final product. The quarry offers a centralized site for processing and is compatible with existing aggregate processing (daytime hot-mix asphalt and concrete plant operation, crushing and recycling) operations that currently exist on Parcel 82.

The proposed expansion of operating hours would eliminate the need to transport aggregate offsite for processing and would, in turn, eliminate the impacts and costs associated with such transportation.⁴ These cost savings would permit Grace Quarry to provide more competitive pricing and, for City and County of Honolulu paving work, would ultimately result in saving taxpayer dollars.

3. NEIGHBORHOOD BOARD MEETING

Grace Pacific is committed to being a good neighbor not only in addressing community concerns by also by supporting the Makakilo and Kapolei communities. Throughout its history, Grace Pacific has supported the surrounding community through donation, services and fostering community programs. With respect to its operations, Grace Pacific is dedicated to maintaining open communication with its neighbors and addressing community concerns.

On August 24, 2022, Grace Pacific presented the proposed changes to the Makakilo/Kapolei/Honokai Hale Neighborhood Board. Community feedback was positive. Several community members and members of the Neighborhood Board expressed gratitude toward Grace Pacific for supporting and fulfilling its commitments to the community. The community and board also asked questions about the proposed

³ Grace Pacific does not currently operate an offsite ready-mix concrete plant.

⁴ If the proposed expansion of the operating hours is approved, Grace Pacific intends to relocate its hot-mix asphalt plant at the Kalaeloa site to the quarry pit on Parcel 82. The operation of the hot-mix asphalt plant is an approved use under the existing Special Use Permit and Conditional Use Permit.

changes. These questions pertained to the shape of the proposed excavation area, visibility of the quarry from the H-1 Freeway and emissions from the hot-mix asphalt plant. The minutes of the August 24, 2022 Neighborhood Board Meeting are attached as Exhibit K.

The concerns regarding view planes are discussed in section 7.2.1, *infra*. With respect to the question regarding emissions from the hot-mix asphalt plant, Grace Pacific responded by providing the specifications for the hot-mix asphalt plant and explaining how the plant's specifications reduce dust and emission concerns. Specifically, the hot-mix asphalt plant contains double barrel drums, which reduce emissions by reintroducing any smoke generated during asphalt processing directly into the flame where any pollutants are burnt. In addition, the plant contains a bag house that captures any dust and reintroduces the dust into the processed asphalt. This results in the dust becoming a part of the final product rather than being emitted. Finally, the hot-mix asphalt plant is operated pursuant to Covered Source Permit 0714-01-CT, which requires compliance with federal and state air pollution laws, including: (1) the National and State Ambient Air Quality Standards; and (2) Hawaii Revised Statutes ("**HRS**"), Chapter 342B and Hawaii Administrative Rules ("**HAR**"), Chapter 11-60.1. Pursuant to this permit, the hot-mix asphalt plant is regularly monitored for compliance with governing air quality laws, which includes regular inspections.

Finally, Grace Pacific was asked to provide additional details and visuals regarding the specific details of the reshaping of the permit and was invited to provide such details at the meeting scheduled for September 28, 2022. Grace Pacific attended that meeting and provided the requested visual material. Again, the community appeared supportive and no concerns were raised.

4. SITE DESCRIPTION

4.1 Ownership

Quarry

Parcel 4, Parcel 74 and Parcel 82 are owned by Grace Pacific.

Pālailai Landfill

The Pālailai Landfill parcel is owned by Kapolei Infrastructure, LLC, an affiliate of James Campbell Company LLC, and is leased to Grace Pacific.

4.2 Topography

Parcel 82 and Parcel 74

Parcel 82 and Parcel 74 slope up from the Freeway from an elevation of 240 feet to 972 feet at the top of Pu‘u Makakilo. Slopes range from about eleven percent at the lower slopes of the undisturbed portions of the pu‘u to about forty percent at the highest elevation. The existing pit on Parcel 74 and Parcel 82 is located between two ridgelines on the southeastern slopes of the pu‘u.

4.3 Abutting Uses

Parcels 74 and 82

The orientation of the property lines of Parcels 74 and 82 is described as northeast (NE) facing Waipahu/Kunia; northwest (NW) facing Pu‘u Makakilo (for Parcel 82) and facing the residential area of Pālehua East (for Parcel 74); southwest (SW) facing the lower Makakilo Drive residential area; and southeast (SE) facing the H-1 Freeway. The Kapolei Knolls community is located approximately 1,500 feet SW of the pit on Parcel 82 and about 2,700 feet from the processing area in the pit. The Makakilo Drive residential area is located approximately 1,300 feet NW of the pit and about 3,000 feet from the processing area in the pit.

Parcel 82 is surrounded by Parcel 74 on three sides (NE, NW, and SW). The fourth side (SE) abuts the H-1 Freeway.

Parcel 74 abuts grazing activity on AG-1 zoned land to the NE; the Makakilo residential community, zoned R-5, to the west and NW; open space zoned for agriculture to the east; and the H-1 Freeway to the south and SE. Exhibit L (Adjoining Uses).

Pālailai Landfill

The former Pālailai Landfill abuts the Makakilo residential community to the north, NE, and east; undeveloped land zoned R-5 to the NW and west; land zoned AG-2, the site of the AlohaNAP data center and Hawaii Pacific Teleport communications center to the SW; and the Wet ‘n’ Wild waterpark to the south.

4.4 Use History

Parcel 82

Prior to 1973, what is now Parcel 82 (previously a portion of 9-2-03-02) was used for grazing.

In 1973, quarry use was authorized under Conditional Use Permit 72/CUP-15 granted by the Honolulu City Council and Special Use Permit SP73-147 granted by the State Land Use Commission.⁵

Since 1973, part of what is now Parcel 82 has been used for the excavation and primary crushing of basalt aggregate. The remainder of Parcel 82 has operated as a buffer zone designed to provide mitigation of potential noise and dust impacts that might be generated by quarry operations.

In 1985, Grace Pacific took over the operation of the Makakilo Quarry when it purchased Pacific Concrete & Rock Company, the former operator of the quarry.

In 1988, Parcel 9-2-03-02 was subdivided into various parcels, including Parcel 82 and Parcel 74.

In 2002, Zoning Variance VAR51 was granted, allowing for the receiving and recycling of concrete rubble and asphalt pavements along with the finish crushing of B-Grade basalt products.

In November 2008, SP73-147 was amended to relocate the excavation and buffer areas on Parcel 82. The amendment also provided that several processing operations would be relocated from Parcel 4 into the upper quarry. The amendment further extended the life of the quarry operations to December 31, 2032.

In July 2009, 2007/CUP-91 was granted (superseding 72/CUP-15). The new permit removed Parcel 4 from the Conditional Use Permit.

⁵ On January 13, 1973, the Governor accepted the Environmental Impact Statement (EIS) for the establishment of the quarry and processing facility. The current application is not subject to environmental disclosure requirements of the Environmental Impact Law, Chapter 343, Hawaii Revised Statutes. As DPP found in its the 2009 DPP Order approving the Conditional Use Permit, an existing tunnel beneath the H-1 Freeway was formerly used to transport aggregate from Parcel 82 to Parcel 4 for processing and the maintenance of power and water lines. Since the closure of Parcel 4, the tunnel is no longer used in quarry operations and currently houses power lines providing the quarry power from a HECO substation that on Parcel 4. The current application does not propose changes to the intensity of this use and therefore is exempt from the requirements of Hawaii Revised Statutes chapter 343 pursuant to Exemption Class #1 of the Comprehensive Exemption List for the City and County of Honolulu Department of Land Utilization as approved by the Environmental Quality Commission, dated August 12, 1981.

Parcel 74

Prior to 1973, what is now Parcel 74 (previously a portion of 9-2-03-02) was used for livestock grazing.

In 1973, a portion of what is now Parcel 74 was designated as buffer zone for the quarry under 72CUP-15. The balance of the parcel remained in grazing use.

In 1989, Parcel 9-2-03-02 was subdivided into various parcels, including Parcel 74 and Parcel 82.

In 1988, 88CUP1-30 was granted for an 18-hole golf course on 232 acres of the 312 acres on Parcel 74. A portion of the approved golf course (85 acres) was located in the permitted quarry buffer zone; the remaining acreage was characterized as "other acreage."

Chiyoda Pacific acquired Parcel 74 in 1990. Chiyoda commenced golf course construction in 1990, and the project was 50% complete when it was abandoned in 1993.

Grace Pacific purchased Parcel 74 in 1995 in a judicial foreclosure proceeding. Difficulties in obtaining a long-term source of irrigation water have precluded completion of the golf course project to date.

Since 1995, Parcel 74 has been used as open space and as a buffer zone for quarry and processing operations.

In discussions with the City over the permitting of the Proposed Use, the City advised that if the golf course CUP were to be left in place, it would have to be modified as the layout for the golf course would no longer be able to be completed as permitted. 88CUP1-30 was rescinded in October 2006. Deed restrictions running with the land limit the use of Parcel 74 to golf course and preservation.

As detailed above, in November 2008, Grace Pacific's application to amend SP73-147 was granted allowing the relocation of the excavation area on Parcel 74. The remainder of Parcel 74 operates as a buffer zone.

Parcel 4

Prior to 1973, the steeper slopes in Parcel 4 were used for grazing and irrigation flumes, and the gentler slopes were used for sugarcane cultivation.

Use Permits 72/CUP-15 and SP73-147 authorize the permittee to establish a processing facility for the rock extracted by the quarry operations. A 35-acre processing site was located on Parcel 4, situated across the H-1 Freeway from the mauka quarry operations. A State Department of Transportation Tunnel Easement allowed Grace Pacific to bring the raw material from the Quarry via a tunnel to the makai site for

subsequent processing into aggregates for sale or for the production of hot-mix asphalt and ready-mix concrete.

As a condition to the approval to amend SP73-147, all processing operations on Parcel 4 were to be relocated to the upper quarry or the Campbell Industrial Park by 2012. Parcel 4 was also to be returned to landscaped open space. Between 2008 and 2012, Grace Pacific relocated the majority of its processing operations onto Parcel 82 and the remainder of the operations to Campbell Industrial Park. By the end of 2012, Grace Pacific had ceased and relocated all existing processing operations on Parcel 4.

In July 2009, 2007/CUP-91 was granted for the upper quarry. Parcel 4 was not included in the new conditional use permit.

Parcel 4 is currently maintained as open space and operates as an additional buffer area for quarry and processing operations.

4.5 Soil Types and Classifications

The U.S. Department of Agriculture Soils Conservation Survey classifies soils on the portion of Parcel 82, where the current processing area is located, as Stony steep land, Mahana Badland Complex (MBL), Mahana Silty Clay Loam (McD2), 12 to 20 percent slopes, and Helemano Silty Clay (HLMG), 30 to 90 percent slopes. The majority of the processing area is classified as stony steep land. Mahana Silty Clay Loam and Helemano Silty Clay soils are used for pasture, woodland, and wildlife habitat. Mahana Badland Complex consists of Mahana soils and Badland and is used for pasture.

The U.S. Department of Agriculture Soils Conservation Survey classifies soils on Parcel 74 as a combination of Mahana Silty Clay Loam (McD2), 12 to 20 percent slopes, Helemano Silty Clay (HLMG), 30 to 90 percent slopes, and Mahana Badland Complex (MBL). A majority of the excavation area on Parcel 74 falls within the MBL soil type.

The U.S. Department of Agriculture Soils Conservation Survey classifies soils on Parcel 4 as a combination of Mahana Silty Clay Loam (McD2), 12 to 20 percent slopes, Mahana Badland Complex (MBL), Molokai silty clay loam, 0 to 3 percent slopes, MLRA 158 (MuA), Molokai silty clay loam, 7 to 15 percent slopes, MLRA 158 (MuC), Waialua silty clay, 0 to 3 percent slopes (WkA), Ewa silty clay loam, 3 to 6 percent slopes (EaB), Ewa stony silty clay, 6 to 12 percent slopes (EwC), Kawaihapai very stony clay loam, 0 to 15 percent slopes, MLRA 158 (Klbc), Waialua stony silty clay, 3 to 8 percent slopes (WIB), and stony steep land.

The Land Study Bureau Detailed Land Classification system classifies Parcel 82 and Parcel 74 as overall (master) rating class “E,” the lowest agricultural productivity

rating. Parcel 4 contains soils with a productivity rating class of “A,” “B,” “D,” and “E.”

The Agricultural Lands of Importance to the State of Hawaii (“ALISH”) classification system classifies a small portion of the quarry pit as “Other Important Agricultural Land.” The remainder of the quarry pit is not rated under the ALISH system. The ALISH System rates Parcel 4 as “Prime Agricultural Land” and “Other Important Agricultural Land.”

5. PROJECT DESCRIPTION

5.1 Existing Operations-Parcels 74 and 82

The quarry mauka of the H-1 Freeway has been in operation since 1973. The quarry produces up to 1,000,000 tons of aggregate per year that is characterized as either A-Grade, of a quality suitable for ready-mix concrete or hot-mix asphalt, or B-Grade, of a quality suitable for structural fill. Quarry operations are regulated by the Mining Safety Health Administration (“MSHA”). Grace Pacific operates the quarry under MSHA Permit No. 51-00173 Makakilo Quarry Grace Pacific LLC.

The current quarry process is as follows:

Removal of Overburden - The surface layer of overburden, averaging 20 feet in depth and consisting of soils and cinder, is removed in 3- to 5-acre blocks by ripping and stripping with a D-10 Dozer and a 345 Excavator. The removed overburden is used for berms or ramps within the quarry or sold as general fill.

Drilling and Blasting - The rock material is extracted by drilling and blasting (shot-rock). The drilling is performed by two ECM 720 Rock Drills. Typically, a grid pattern of 40 to 80 holes is drilled to a depth of 20- to 40-feet. The controls over explosives used in blasting today are highly sophisticated, and much of the crushing of rock at Makakilo is accomplished in the blasting process. Depending upon the grid pattern and depth, blasts yield between 5,000- and 15,000-tons of shot-rock.

Excavate & Haul - The shot rock is gathered by the 345 Excavator and D-10 Dozer. A 13 cubic yard 990 Front End Loader loads six 773 Haul Trucks at the quarry face. The Rock Trucks haul the shot rock to the Primary Plant and dump it into a receiving hopper.

Primary Crushing - The primary crushing process involves screening out the fines and dirt, then crushing the shot rock to a 12-inch diameter, followed by secondary crushing to a 4 inch “surge” material. The A-Grade surge material is transported to the Finish Crushing Plant on Parcel 82 where the A-Grade surge is further crushed, screened, and stockpiled into specific sizes ranging

from 1/4 inch minus to 1 1/2 inches. An adjacent Wash Plant produces products similar to sand.

The B-Grade surge is processed at a nearby finish crushing plant (also called the B Finish Plant) on Parcel 82. The B-Grade surge is further crushed, screened, and stockpiled into specific sizes ranging from 6 inches to 1/4 inch minus.

Recycle Plant/B-Grade Finish Crushing - Quarry operations on Parcel 82 also include a recycling program authorized under Zoning Variance 2002VAR-51. Asphalt and concrete rubble from highway and construction projects on O‘ahu are brought to the site for processing and re-sale. Approximately 100,000 tons of asphalt and concrete are brought to the site annually and are processed at the Recycle Plant.

Ready-Mix Concrete Plant - In 2022, a ready-mix concrete plant was established in the quarry pit on Parcel 82. Ready-mix concrete is batched by loading measured dry components of concrete—A-Grade aggregate and sand—into a mixing plant. After the dry components are mixed, they are loaded into mixing trucks and water is added. Concrete is mixed in the truck during transport to the site where the concrete will be poured. Typically, ready-mix concrete must be loaded within 2 hours prior to its use.

Buffer Areas - Approximately 284 acres of Parcels 74 and 82 operate as buffer areas to quarry, aggregate processing, and recycling activities.

5.2 Proposed Operations-Parcel 82

Grace Pacific would either relocate its hot-mix asphalt plant from the Kalaeloa site to the processing area in the quarry pit or install another hot-mix asphalt plant if its request to expand the operating hours of the processing activities in the quarry were to be approved. The hot-mix asphalt plant is currently an approved use under both the Special Use Permit and Conditional Use Permit. Hot-mix asphalt is processed by mixing A-Grade aggregate and other materials. Components are combined in a mixing plant that heats and blends the aggregate into usable asphalt. The asphalt is then transported to a job site where it must be utilized while it is still hot. Various factors affect how soon hot-mix asphalt must be loaded before use. Typically, hot-mix asphalt must be used within a few hours of loading.

5.3 Existing Operations-Parcel 4

The approximately 54 acres on Parcel 4 are currently maintained as open landscaped space and operate as an additional buffer zone for quarry operations. Grace Pacific is not seeking changes to the use of Parcel 4 under this proposal.

5.4 Existing and Proposed Hours of Operation

Table 1 below summarizes the existing hours of operation and the proposed operating hours.

Table 1 - Existing and Proposed Operating Hours

Parcel	Activity	Existing Hours	Proposed Hours
82 (Pit)	Crushing (including transporting rock in-quarry for crushing)	6:00 a.m. to 6:00 p.m., Monday to Saturday	Unchanged
	Recycling	6:00 a.m. to 6:00 p.m., Monday to Saturday	Unchanged
	Sales	7:00 a.m. to 4:30 p.m., Monday to Saturday	24 hours a day, 7 days a week
	Maintenance	3:00 p.m. to 6:00 p.m., Monday to Saturday	24 hours a day, 7 days a week
	Receiving of permitted recycle materials	6:00 p.m. to 10:00 p.m., Sunday to Friday	24 hours a day, 7 days a week
	Operation of concrete and hot-mix asphalt plants	6:00 a.m. to 6:00 p.m., Monday to Friday	24 hours a day, 7 days a week
74 (Excavation Area)	Excavation	6:00 a.m. to 6:00 p.m., Monday to Saturday	Unchanged
	Blasting	6:00 a.m. to 6:00 p.m., Monday to Saturday	Unchanged

5.5 Existing and Proposed Number of Clients

Existing - Parcel 82

Product is sold from the quarry pit on Parcel 82 and is typically loaded into dump trucks owned by Grace Pacific or hired by various contractors and governmental agencies. There are approximately 38,850 round trip dump truck loads annually to Parcel 82. Round trip truck loads vary by market demand and aggregate yield.

Proposed - Parcel 82

See section 6.3, infra.

Parcel 74

There is no existing or proposed sales activity on Parcel 74. All sales activity will be conducted on Parcel 82.

5.6 Existing and Proposed Staff On-Site

Existing - Parcel 82

Grace Pacific currently employs personnel to operate the quarry, recycling, and processing activities on Parcel 82 as follows:

- Primary Plant, 7
- Recycle Plant, 4
- Scalehouse, 3
- Supervisors, 6
- Finish Plant, 6
- Maintenance Shop, 16
- Lab and Testing, 2
- Administrative, 5
- Trucking, 13
- Wash Plant, 2

Proposed - Parcel 82

Under this proposal, Grace Pacific anticipates assigning up to seven to nine employees to the Makakilo Quarry in support of the planned operations on Parcel 82. Grace Pacific also anticipates hiring two additional mechanics. These personnel will be required for proposed expanded operating hours and the operation of the relocated hot-mix asphalt plant.

Existing - Parcel 74

Grace Pacific is not seeking any changes to the personnel on Parcel 74 in this proposal.

5.7 Existing and Proposed Use and Number of Structures

Existing - Parcel 82

The existing structures on Parcel 82 include a primary crushing plant, a wash plant, a maintenance shop building, an administrative office trailer (temporary trailer), a testing lab building, an employee training building (temporary trailer), a primary crushing plant, a temporary trailer office for trucking operations, a temporary trailer office for the vice president of materials, a recycle/B-grade crushing plant, an employee lounge (temporary trailer), a ready-mix concrete plant operated by a licensee, and a truck scale. See Exhibit M (Current Structures and Site Plan).

Proposed - Parcel 82

The hot-mix asphalt plant would be placed in the pit on Parcel 82 as shown on the site plan. See Exhibit M. The hot-mix asphalt plant is an approved use under the permits.

Parcel 74

There are no existing or proposed buildings on Parcel 74.

5.8 Existing and Proposed Building Heights

Existing- Parcel 82

Heights of the existing structures on Parcel 82 are: Finish Crushing Plant, 57 feet; Wash Plant, 40 feet; Ready-Mix Concrete Plant, 50 feet; Maintenance Shop building, 38 feet; Scalehouse, 18 feet; Scalehouse, 12 feet; Administrative Office trailer, 15 feet; Truck Scalehouse 15 feet; Testing Lab building, 22 feet; Employee Training building, 15 feet; Primary Crushing Plant, 45 feet; Recycle/B-grade Crushing plant, 27 feet; and Employee Lounge, 12 feet.

Proposed - Parcel 82

The height of the hot-mix asphalt plant is approximately 64 feet.

Parcel 74

There are no existing or proposed structures on Parcel 74.

6. INFRASTRUCTURE

6.1 Existing and Proposed Wastewater Disposal

Neither Parcel 82 nor Parcel 74 is connected to City wastewater collection and treatment systems. Quarry workers are provided on-site portable toilets. There will be no change to existing wastewater disposal systems on Parcel 74 or Parcel 82.

6.2 Existing and Proposed Water Facilities

Existing - Parcel 82 and Parcel 74

Non-Potable water is available to Parcel 74 and Parcel 82 via a water line from a well in the upper quarry. The well is designated State Well #3-2103-006 and pumpage of .256 mgd or 7,680,000 per month is permitted. In 2022, Grace Pacific's monthly average water usage was 4,400,000 gallons. The water is used on Parcel 82 for dust control, for concrete batching, and for landscaping. Dust control is accomplished using water tank trucks, which spray water on the roadways, stockpiles, and excavated areas.

Proposed - Parcel 82

No changes to the existing water facilities or the allocations for Parcel 82 are anticipated under this proposal. The existing placement of the ready-mix concrete plant in the quarry has resulted in water usage of 25,480 gallons per month. Taking this current use into account, Grace Pacific expects that the plant's annual water usage will be 305,770.5 gallons. If the requested expansion of hours is approved, Grace Pacific anticipates that the concrete plant will be operated primarily at night instead of during the day, which would focus the plant's water usage to the evening hours but would not result in a net change in water usage.

The remaining amendments are not anticipated to materially affect the water usage on Parcel 82. This includes the relocation of the hot mix asphalt plant to the quarry pit.

6.3 Existing and Proposed Traffic and Parking

Existing - Parcel 82

Access to Parcel 82 is provided by the Old Pālehua Road which is connected to the H-1 Freeway via at the Kualaka‘i Parkway interchange (formerly the North-South Road interchange). The Kualaka‘i Parkway interchange accommodates traffic to and from the quarry in both the eastbound and westbound directions. See Exhibit N at 23 and Figure 7.

There are approximately 48,450 annual vehicle round trips to the quarry pit. See Exhibit N, Appendix B. Various on-site parking areas on Parcel 82 are designated for visitors, employees, and equipment parking.

Proposed – Parcel 82

Grace Pacific engaged Fehr & Peers to conduct a Mobility Analysis Report to assess traffic impacts, if any, that the proposed changes would have on the surrounding roads. The proposed changes to the operating hours, the recent placement of the ready-mix concrete plant in the quarry pit, and the placement of the hot-mix asphalt plant in the quarry pit would result in a net increase of 137 new daily vehicle trips to the quarry pit.⁶ Based on the Mobility Analysis Report, Grace Pacific anticipates that the proposed changes will not have any significant impact on surrounding roadway segments, intersections, and pedestrian, bicycle, and transit facilities. Grace Pacific also does not anticipate the need for additional traffic or parking infrastructure requirements for Parcel 82 under this proposal. See Exhibit N.

Existing – Parcel 74

Access to Parcel 74 is provided through Parcel 82. See Exhibit N.

There are no parking areas on Parcel 74.

Proposed – Parcel 74

There are no additional traffic or parking infrastructure requirements for Parcel 74 under this proposal. See Exhibit N.

⁶ Grace Pacific anticipates that the relocation of the hot-mix plant to the floor of the quarry pit would result in the elimination of approximately 12,000 to 13,000 annual round trips between the quarry and the Kalaeloa site. The Mobility Analysis Report conservatively does not consider these eliminated trips.

6.4 Existing and Proposed Electrical Power

Hawaiian Electric provides power to a substation located on Parcel 4 via 46 KVA lines. At the substation, a transformer reduces the voltage to 13 KVA. From the transformer, jacketed lines cross under the H-1 Freeway via a tunnel easement distributing power to all operations on Parcel 82.

The proposed changes would not require any additional electrical power infrastructure.

7. OTHER IMPACTS

7.1 Public Services

Refuse Collection

The generation of solid waste from the quarry will not materially increase under this proposal. All waste material from the quarry will continue to be transported off the property by an independent contractor. Thus, there are no expected adverse impacts on refuse collection in the Makakilo/Kapolei area under this proposal. In fact, the extension of the life of the SUP Permit would result in a continuation of the asphalt recycling activities in the quarry and would prevent tens of thousands of tons of waste asphalt that is currently recycled at the quarry from being deposited into landfills each year. Exhibit Y (Socio-Economic Impact Assessment) at 17.

Fire Protection and Police Services

The Makakilo Quarry is located within existing service areas of the Honolulu Police Department and Honolulu Fire Department. There are no expected adverse impacts on fire protection and police services in the Makakilo/Kapolei area arising from activities on Parcels 74 and 82 under this proposal. No changes are expected to any existing firebreak or access road. A map showing existing firebreak roads is attached hereto as Exhibit O.

In connection with the approval of the modification to the Special Use Permit and the 2008 LUC Order, Grace Pacific prepared a fire prevention and control plan to fulfill condition 1.b. Grace Pacific does not anticipate any adverse impact to the plan resulting from the proposed modifications requested herein. Nevertheless, Grace Pacific will consult with the Honolulu Fire Department to determine whether any changes to the plan are necessary in light of the proposed modifications to the Special Use Permit.

Schools

There are no expected adverse impacts on schools in the Makakilo/Kapolei area under this proposal.

7.2 Physical, Biological and Cultural Environment

7.2.1 Public Views

Grace Pacific engaged Bowers & Kubota to prepare a View Planes Analysis study to assess the visual impact of the proposed changes to the excavation area from selected locations with lines of sight to the project area. The selected locations include the Salvation Army Kroc Center Hawaii (“SAKCH”), Kānehili residential project, the H-1 Freeway just east of the Freeway’s intersection with Kunea Road through the intersection with Kualaka‘i Parkway, the University of Hawai‘i West O‘ahu Campus (“UHWOC”), and along a portion of Kealanani Avenue. The selected locations are depicted on Figure 2.3 of Exhibit P. In sum, the quarry is partially visible from all of these sites and excavation further mauka would be visible from the sites.

Included in the View Planes Analysis is an updated final grading plan directed at addressing the changes in topography resulting from the proposed changes to the excavation area. Combined with the current renaturalization plan initially submitted to the Department, the post-closure plans will mitigate any impacts to the views of the slopes of Pu‘u Makakilo. Each of the selected locations is discussed in further detail below.

The processing activities in the quarry pit are not visible from any of the selected locations as they are located at the floor of the quarry pit, shielding them from public lines of sight. Only the upper reaches on the mauka portions of the landscaping and grading area of the quarry are visible from off-site.

Views from the Salvation Army Kroc Center Hawai‘i

The SAKCH is a 200,000 square foot community center located along Kualaka‘i Parkway in ‘Ewa Beach and is located southeast of the quarry. Presently, the upper portions of the quarry excavation area are visible from the intersection of Keahumoa Parkway and Kualaka‘i Parkway. Although the proposed changes to the excavation area would result in grading further up the slopes of Pu‘u Makakilo, the visual impact of the existing grading and the proposed grading would be mitigated through the implementation of the final grading plan attached to the View Planes Analysis. See Exhibit P. Specifically, the visible portions of the excavated hillside and exposed rock faces would be extenuated by matching the natural appearance with the surrounding slopes. After renaturalization, the visible portions of the quarry from the SAKCH site would blend in with the slopes of Pu‘u Makakilo and the adjacent hillsides in both form and composition. The existing view and a simulated view after the closure and renaturalization from the SAKCH site are included in Figure 3.1 of Exhibit P.

Views from the Kānehili Residential Project

The Kānehili residential project is a 92-acre residential subdivision located in Kapolei along Kualaka‘i and Kapolei Parkway. Kānehili is located southeast of the quarry. Currently, the north and west faces of the quarry walls are visible from the residential project. The proposed changes to the excavation area further mauka would result in grading further up the slopes and would likely increase the visible portions of the quarry from the residential project. However, the implementation of the final grading plan would minimize the visual prominence of the quarry site by replacing the faces of the quarry excavation area with more gradual slopes. In addition, after renaturalization, the site would blend in with the sparsely vegetated slopes of Pu‘u Makakilo. The existing view and a simulated view after the closure and renaturalization of the quarry is included in Figure 3.2 of Exhibit P.

Views from the H-1 Freeway

The eastern edge of Makakilo Quarry is visible from the H-1 Freeway beginning just east of the Freeway’s intersection with Kunea Road through the intersection with Kualaka‘i Parkway. An existing mound of overburden is the most prominent visible feature from this location. The implementation of the final closure grading plan would minimize views of the quarry from this site via the creation of a berm running along the northeastern rim of the quarry pit. In addition, the mound of overburden will be removed as a part of the final grading plan. Furthermore, after renaturalization, the quarry site would have minimal visual impact to views from the H-1 Freeway. See Exhibit P, Figure 3.3.

Views from University of Hawai‘i West O‘ahu Campus

The UHWOC is located directly east of the quarry. Presently, the mauka face of the quarry on the northwestern side of the pit is visible from the campus. Additionally, mounds of overburden are distinguishable from the rest of the hillside from the campus. An existing berm on the makai side of the quarry along the H-1 Freeway blocks the views of the quarry pit and many of the lower slopes of the excavation area. The proposed expansion of the mining area would result in portions of the currently undisturbed slopes being graded to be slightly more steep than existing conditions. After the implementation of the final grading plan would eliminate the steep faces that currently distinguish the quarry site from the hillside of Pu‘u Makakilo. The mounds of overburden will also be removed. After the implementation of the renaturalization plan, the quarry site would have minimal impact to views of the Pu‘u from UHWOC. Exhibit P, Figure 3.4.

Views from Kealanani Avenue

Kealanani Avenue is located southwest of the quarry pit. The quarry pit is not visible from this site. Mounds of overburden are visible from the site due to their

incongruence with the profile of the hillside. In addition, the upper portions of the excavated hillside along the western edge of the quarry are also visible from the site. The proposed expansion of the mining area would affect a further portion of the mauka slopes resulting in slightly steeper slopes than current conditions. Implementation of the final grading plan would result in the removal of the visible mounds of overburden and a smoothing of the excavated sections of the slopes resulting in a more consistent appearance. After renaturalization, the quarry site would blend into the surrounding natural hillside. Exhibit P, Figure 3.5.

7.2.2 Natural Habitats

Vegetation on the expansion site as well as in the surrounding area is limited in variety. The predominant species include Guinea grass (*Panicum maximum*), koa hale (*Leucaena leucocephala*), pili grasses (*Heteropogon contortus*) and natal redtop (*Melinis repens*), with sparse shrubs and herbs in between. There are no endangered or threatened native species.

The hot, arid conditions of the site offer little habitat for fauna or wildlife species. Site studies have found that rats and mongoose typically occur in the area. Flyovers by a wide variety of urban avifaunal species, including zebra dove, common myna, house sparrow, house finch, bulbul, and Java finch are common, but none are wholly dependent on the area for foraging or roosting for survival. None are listed as endangered or threatened. Additional detail relating to the natural habitats of the project area are provided in Exhibit Q (Biological Survey).

There are no expected adverse impacts on natural habitats at Pu‘u Makakilo arising from this proposal.

7.2.3 Flood Hazard

According to the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA), the subject property is located in Zone D. These are areas which flood hazards are undetermined, but are possible. The proposed expansion of the quarry pit would not result in adverse impacts on flood hazards in the Makakilo/Kapolei area as all runoff created by the project will flow into the quarry pit or will continue to sheet into existing natural drainage features. Information regarding the onsite drainage swales and the general flow of water through the quarry pit is attached hereto. Exhibits R-1, R-2.

In addition, the quarry is covered under a National Pollutant Discharge Elimination System and a Storm Water Pollution Prevention Program (“SWPPP”) per Hawaii Administrative Rules § 11-55, which evaluates and sets out measures to control any potential pollutant discharge. Exhibit R-3. As explained in the SWPPP, stormwater discharge from the quarry is not anticipated. Nevertheless, the SWPPP

sets out various control measures implemented by Grace Pacific pursuant to the SWPPP.

The SWPPP and potential stormwater discharges are overseen by the Department of Health (“DOH”). Grace Pacific submits regular monitoring reports to DOH as set forth in the SWPPP and submits an annual report. Quarterly site inspections are conducted as set forth in the SWPPP.

7.2.4 Historic and Cultural Sites

A surface archaeological reconnaissance was conducted on Parcel 74 by Applied Research Group of Bishop Museum in March 1988 as part of the previous owner's CUP application. The reconnaissance found no surface sites and, because the potential for subsurface sites was minimal, the study concluded that no testing was warranted. The State Historic Preservation Division (“SHPD”) concurred with the conclusion. The proposed excavation area is within the approved golf course area.

In addition, in 2008, Grace Pacific engaged Pacific Legacy, Inc. to prepare a Cultural Impact Assessment (“CIA”).

Grace Pacific has reengaged Pacific Legacy to perform an updated CIA and a Literature Review and Field Inspection for the proposed 15.6-acre expansion area. Exhibit S (CIA) and Exhibit T (LRFI). In preparing the CIA, Pacific Legacy made attempts to identify and locate persons knowledgeable about traditional practices that took place in the past, or that are currently taking place, in the area potentially impacted by the project. Pacific Legacy reached out to three individuals interviewed in connection with the CIA in 2008, 15 additional individual stakeholders and the SHPD Cultural Historian for O‘ahu, Kaua‘i and Ni‘ihau, Ka‘ahiki Solis (to identify additional consulting parties).

In total, 21 individuals were contacted. Concerns from these individuals broadly fell within three categories:

1. Potential disturbance of historic properties both within and around the project area
2. Disturbance of iwi kūpuna during quarrying activities⁷
3. Impacts of expanded mining activities on current residents

⁷ The CIA notes that given the significant disturbance that has already occurred within the project area from past industrial sugarcane agriculture and golf course construction, it is likely that if there were iwi kūpuna within the project area, they would have already been disturbed by previous activities.

The literature review found that there had already been significant disturbance within the Project area from industrial agricultural and quarrying activities, as well as the modern development of the golf course in the 1990s. Most historic properties in the immediate vicinity of the project area relate to post-contact industrial agriculture and quarrying. The field inspection identified five potential historic properties: a concrete ditch, two modified outcrops, and two terrace/wall segments, all with likely post-Contact associations. However, given the discovery of the potential historic properties, Pacific Legacy recommended and prepared an Archaeological Inventory Survey to thoroughly identify and document all historic properties and provide significance assessments and mitigation recommendations. The Draft Archaeological Inventory Survey is attached hereto as Exhibit Z. No further work was recommended. The Archaeological Inventory Survey has been submitted to SHPD for review and approval.

7.3 Housing, Population, Employment, and Socio-Economic Conditions

While Grace Pacific anticipates assigning or—potentially—hiring additional personnel to staff the hot-mix asphalt plant and the quarry during the proposed expanded operating hours, as discussed in section 5.6, *supra*, Grace Pacific expects the additional personnel working at the quarry to be limited to approximately 9-12 employees. Accordingly, there are no expected unreasonable impacts on housing, population and employment in the Makakilo/Kapolei area arising from this proposal.

Specifically, with respect to employment, if the requested amendments are granted, Grace Pacific will be able to continue to provide stable employment to the 57 individuals that it currently employs to operate the quarry. Grace Pacific has experienced tremendous employee loyalty and longevity over its history. The average Grace Pacific employee stays with the company for approximately 14 years. The median wage rate for employees working at the quarry is \$49.07 per hour. At the median Makakilo Quarry wage rate, this equates to approximately \$22.8 million in new personal income paid from Grace Pacific, assuming three percent annual raises, over the 15-year extension of the SUP. Exhibit Y at 14.

7.4 Parks and Recreation

There are no anticipated adverse impacts on parks and recreation in the Makakilo/Kapolei area under this proposal.

7.5 Other Impacts-Noise, Lights, Dust, Odor, Vibrations, Etc.

7.5.1 Noise

The proposed changes will not adversely affect the surrounding neighborhoods. The noise regulations set forth in Title 11, Chapter 46, Hawaii Administrative Rules,

Community Noise Control, will continue to apply to all operations conducted in the quarry. Grace Pacific will not conduct blasting outside of existing blasting hours. Noise studies conducted by Grace Pacific have consistently shown that noise generated by the quarry is within the acceptable parameters. A recent Noise Impact Report prepared by CENSEO AV+Acoustics evaluated the extent of noise generated by current quarry activities and expected to be generated by the proposed changes at five receptor locations representing surrounding uses. These receptor locations were used to measure noise from single family residences located at Kulihi Street and Ohio Street (southwest of the quarry), Nemo Street (northwest of the quarry), Pueonani Street (northwest of the quarry), and Kapolei Knolls (south of the quarry across the H-1 Freeway) and commercial/university uses at UHWOC (east of the quarry). The Noise Impact Study concludes that the predicted overall noise levels that would result from the proposed changes are expected to comply with the Hawai'i Department of Health Community Noise Control rules set forth in Hawaii Administrative Rules, Title 11, Chapter 46. See Exhibit U at Tables 8 and 9. In addition, the Noise Impact Study contains further conclusions summarized as follows:

1. Overall operational activities are not expected to be audible at the residential neighborhoods to the north and northwest of the project site due to the topographical features that block the line-of-sight into the quarry from these north and northwest locations.
2. The residential and commercial areas to the south of the quarry project site are exposed to vehicular traffic noise from H-1 Freeway that will likely mask operational noises from the quarry.
3. The concrete and hot-mix asphalt operations are not expected to significantly contribute to the overall quarry operations noise levels as received at the surrounding noise sensitive receptors.
4. The expanded sales hours will result in 24/7 trucking activities but noise from those activities is expected to be significantly less than the existing ambient noise environment and is not expected to be audible at the surrounding noise receptor locations.
5. The mining activities (e.g., drilling, blasting, and transportation of materials to the processing plant) will move closer to the residential neighborhoods to the north and northwest of the project site due to the proposed boundary amendment. Noise levels during these activities are expected to increase by up to 5.5 dB. Noises from these activities are not expected to be audible since they are still less than the existing ambient noise environment.

7.5.2 Lights

The proposed expansion of the operating hours in the quarry will require the placement of lighting to be utilized during night operations. Grace Pacific has engaged Ronald N.S. Ho & Associates to prepare a Lighting Assessment Report to evaluate the effect of the placement of lighting to be utilized during night operations on surrounding properties and to provide recommendations for lighting the quarry during night operations. In preparing the Lighting Assessment Report, Ronald N.S. Ho & Associates performed several illumination calculations and found that there will be no appreciable direct illumination or light being reflected off the exposed quarry walls. This is because the lighting from within the quarry will all be mounted below the perimeter berms which prevent any direct illumination from escaping the quarry. In addition, the distance from the light sources to the quarry walls, coupled with the dark color of the quarry walls, eliminate any appreciable light being reflected off the face of the quarry walls. Exhibit V at 1 (Lighting Assessment Report).

Nevertheless, Ronald N.S. Ho & Associates did identify two situations that could result in visual impacts to the surrounding areas. The first situation is light reflecting off light misting to moderate rain fall, which may cause illumination over the quarry. This is mitigated by the fact that Makakilo experiences very low rain fall and the hot-mix asphalt batching plant will cease operations during heavy rains. Thus, the visual impact of light reflecting off falling rain is remote. Exhibit V at 1.

The second situation is with respect to the hot-mix asphalt plant's three portable generator lighting systems. Each of these lighting systems contains four unshielded white HID floodlights and each light is aimable along the horizontal and vertical axis.

Based on these two situations, Ronald N.S. Ho & Associates made three primary recommendations, including:

1. Utilizing 3000K light sources – 3000k light sources are warmer than white light sources. 3000k light sources would minimize contrast from any light reflecting into the sky during rain events and any light that reflects off of concrete pavement adjacent to the concrete and hot-mix asphalt plants.
2. Utilizing Full Cutoff Light Fixtures – Full cutoff light fixtures do not allow any light to be distributed above the light fixture's horizontal plane. Utilizing full cutoff light fixtures for lighting during night operations would reduce any light reflecting off of misting rain.
3. Making Alterations to the Portable Generator Lighting Systems – The portable generator lights should be angled downwards, replaced with 3000k lights, and provided additional shielding. In addition, the generators should be located to the southern side of each work area so the floodlights will only be pointed in the north, east, and west directions.

Exhibit V at 10-11. These recommendations, along with other minor recommendations contained in the Lighting Assessment Report will be implemented if the proposed expansion of operating hours is granted.

7.5.3 Dust

Grace Pacific currently employs dust mitigation measures within the quarry. Standard practices include frequent sprinkling of water over active work areas and temporary halting of quarry operations during strong windy periods. In conjunction with submitting its 2008 application to amend the Special Use Permit, Grace Pacific submitted a dust control management plan to DPP and the LUC. As required by the 2008 LUC Order, Grace Pacific also submits annual compliance reports to the LUC demonstrating compliance with the dust control management plan. Grace Pacific will continue to comply with these reporting requirements.

Moreover, as a condition to the retention of the Special Use Permit, Grace Pacific is required to work with the State Department of Health to ensure that no visible fugitive dust crosses the combined property boundaries of Parcels 74 and 82. Dust studies for the upper quarry have repeatedly shown that fugitive dust has been adequately controlled. Grace Pacific will continue to comply with this condition.

Grace Pacific has engaged Environmental Risk Analysis LLC to prepare a Dust Evaluation Report to address the generation of dust based on the expansion of the quarry operating hours, the recent addition of the concrete plant, and the anticipated addition of the hot-mix asphalt plant. The report analyzes current and historical air monitoring data from around the quarry pit and concludes that, when taken cumulatively with current quarry operations, the dust generating activities in the quarry would not exceed the National Ambient Air Quality Standards for particulate matter (PM₁₀) of 150 µg/m. Exhibit W (Dust Evaluation Report). Accordingly, no significant additional dust impacts are expected as a result of the proposed modifications.

7.5.4 Odor

There are no anticipated odor issues associated with this proposal.

7.5.5 Vibrations

Grace Pacific has engaged Detecht, LLC to evaluate the impacts, if any, that the proposed reshaping of the pit area would have on surrounding properties. Detecht has concluded that the minor reshaping of the pit would not result in any adverse effects to surrounding properties. Exhibit X (Vibration Monitoring Summary). Mining and blasting activity will continue to have minimal to no impact on surrounding property owners. Grace Pacific will continue monitoring blasting pursuant to all applicable permits and state and federal regulations.

7.5.6 Projected Community Growth Through 2047

Parcel 74 is abutted to the west by an undeveloped 85-acre lot identified as TMK 9-2-3-98 (“**Lot 98**”). Lot 98 is owned by Makakilo Bluffs LLC. The majority of Lot 98 is zoned P-2 General Preservation. Lot 98 is designated as an “Urban Expansion Area” by the ‘Ewa Development Plan. The discussion in sections 7 and 8, apply in equal force to any potential developments on Lot 98.

8. JUSTIFICATION

8.1 Land Use Commission Guidelines

Hawaii Administrative Rules, Title 15, Subtitle 3, Chapter 15, Section 15-15-95(c) provides that “unusual and reasonable” uses within agricultural and rural districts other than those for which the district is classified may be permitted. Section 15-15-95(c) establishes the following guidelines for determining whether a proposed use is “unusual and reasonable:”

- (1) The use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205A, HRS, and the rules of the commission;
- (2) The proposed use would not adversely affect surrounding property;
- (3) The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water drainage and school improvements, and police and fire protection;
- (4) Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established; and
- (5) The land upon which the proposed use is sought is unsuited for the uses permitted within the district.

Section 15-15-96.1 governs the modification of a Special Use Permit and provides:

Any request for modification of a special permit or modification, release, or deletion of a condition imposed on a special permit, whether imposed by the county planning commission or the commission, shall first be submitted to the appropriate county planning commission and, for special permits for land greater than fifteen acres in size, the commission, for consideration and decision.

The decision of the county planning commission with respect to modification of a special permit, or modification, release or deletion of a condition to a special permit shall comply with the requirements of section 15-15-95 and 15-15-96.

For the reasons discussed in the following sections, the proposed permit extension, reshaping of the excavation area and expansion of the operating hours of the quarry are appropriate modifications and are “unusual and reasonable” uses.

8.1.1 The Proposed Use Is Not Contrary to the Objectives Sought to Be Accomplished by HRS Chapters 205 and 205A

The parcels that are the subject matter of this application are located in the Agricultural District as designated by the State Land Use Commission and the AG-2 Zoning District as designated by the City and County of Honolulu. The proposed extension of the life of the permit to 2047, reshaping of the excavation area and expansion of the operating hours at the quarry are not contrary to the objectives sought to be accomplished by HRS chapters 205 and 205A.

First, the proposed use is not contrary to the objective of protecting land with a high capacity for intensive cultivation. See HRS 205(a)(3). As noted above in section 4.5, the Land Study Bureau Detailed Land Classification system classifies the existing pit and excavation area on Parcel 82 and Parcel 74 as overall (master) productivity rating class “E”—the lowest agricultural productivity rating.

Second, the proposed use is not contrary to the objective of HRS Chapter 205A to provide coastal recreational opportunities accessible to the public. HRS section 205A-2(c)(1)(B) provides that it is the policy of Chapter 205A to:

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

The quarry is located more than three miles from the nearest coastline. The proposed action will not interfere with any existing or planned shoreline recreational opportunities including surfing, beachgoing, picnicking, and fishing. No public access to such coastal recreational resources will be obstructed nor interfered with by the proposed action.

Third, the proposed use is not contrary to the objective of Chapter 205A to “[p]rotect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.” HRS § 205A-2(c)(2) provides that it is the policy of Chapter 205A to

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

As the Literature Review and Field Inspection concluded, all structures in the area proposed to be designated as the reshaped excavation area are more likely than not from the post-contact period. Moreover, Grace Pacific has authorized Pacific Legacy to reach out to SHPD with its recommendation and will proceed with an Archaeological Inventory Survey if SHPD concurs with Pacific Legacy’s recommendation.

Fourth, the proposed action is not contrary to the objective of Chapter 205A to “[p]rotect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.” To this end, HRS section 205A-2(c)(3) provides that it is the policy of Chapter 205A to:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments that are not coastal dependent to locate in inland areas.

The reshaping of the quarry pit shifts areas to be disturbed from the slopes of Pu‘u Makakilo along a portion of the northern and southwestern edges of the pit to the northwestern and western edges of the pit. This will result in changes to the face of the hillside in the new areas but would preserve the face of the hillside with respect to the areas removed from the excavation area. The visual changes to the hillside will be mitigated by berming already in place. The final grading and remediation plans will harmonize disrupted portions of the hillside with the natural hillside.

Fifth, the proposed action is not contrary to the objective in Chapter 205A to “[p]rotect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.” In furtherance of this objective, HRS section 205A-2(c)(4) provides that it is the policy of Chapter 205A to:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(E) 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.

The quarry is located inland more than three miles from the shoreline. It does not and will not adversely affect nor disrupt O‘ahu's valuable coastal ecosystems and marine waters. There are no perennial stream waters within the project site that discharges into the ocean. The proposed action further complies with existing State water quality standards.

Sixth, the proposed action is not contrary to the objective of Chapter 205A to “[p]rovide public or private facilities and improvements important to the State's economy in suitable locations.” It is the policy of Chapter 205A to:

- (A) Concentrate coastal dependent development in appropriate areas;
- (B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
- (C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
 - (i) Use of presently designated locations is not feasible;
 - (ii) Adverse environmental effects are minimized; and
 - (iii) The development is important to the State's economy.

HRS § 205A-2(c)(5).

As the quarry is not located on the shoreline, it will not interfere with coastal dependent facilities and their related activities.

Seventh, the proposed action is not contrary to the objective in Chapter 205A to “[r]educe hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.” To this end, HRS section 205A-2(c)(6) provides that it is the policy of chapter 205A to:

- (A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;
- (B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;
- (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
- (D) Prevent coastal flooding from inland projects.

The proposed project is located more than three miles from the shoreline and, as a result, will not be in danger of tsunami inundation, storm waves, shoreline erosion, and coastal subsidence. There are no streams or rivers on the project site, and no riverine flooding. The project is located outside of any Special Flood Hazard Area as determined by the Flood Insurance Rate Maps (FIRM) of the Federal Emergency Management Agency. Further, the project site is not located in any area subject to point or nonpoint source pollution hazards

Eighth, the proposed action is not contrary to the objective of chapter 205A to “[i]mprove the development review process, communication, and public participation in the management of coastal resources and hazards.” HRS section 205A-2(c)(7) provides that it is the policy of chapter 205A to:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and

(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

The objectives and policies regarding the development review process, communication, and public participation will be fulfilled through the Special Permit amendment process.

Ninth, the proposed uses are not contrary to the objective of chapter 205A to “[s]timulate public awareness, education, and participation in coastal management.” In furtherance of this goal, HRS section 205A-2(c)(8) provides that it is the policy of the chapter to:

(A) Promote public involvement in coastal zone management processes;

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

This objective and policy will be fulfilled through public notice and a public hearing during the Special Use Permit Amendment process.

Tenth, the proposed action is not contrary to the objective of chapter 205A to “[p]rotect beaches for public use and recreation.” To this end, HRS section 205A-2(c)(9) provides that it is the policy of the chapter to:

A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline;

(D) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and

(E) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.

The quarry is located more than three miles from the shoreline and will not involve any shoreline structures nor shoreline erosion-protection features. The proposed project will not impact beaches or shoreline resources nor interfere with existing recreational and waterline activities.

Finally, the proposed action is not contrary to the objection of chapter 205A to “[p]romote the protection, use, and development of marine and coastal resources to assure their sustainability.” To this end it is the policy of chapter 205A to:

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources to acquire and inventory information necessary

to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

The above objective and policies are directed at government agencies. The proposed project will not interfere with any government programs designed to implement the State's ocean resources management plan.

8.1.2 Proposed Use Will Not Adversely Affect Surrounding Properties

As discussed in sections 6 and 7, *supra*, the proposed changes will not adversely affect surrounding properties. Grace Pacific will be able to adequately control any impacts through management and mitigation. Further, quarry buffer zones on Parcels 4, 74, and 82 operate to minimize potential adverse effects on neighboring properties. As noted above, Grace Pacific has extensively monitored existing quarry activity and studies conducted by Grace Pacific have consistently shown that potential impacts generated by quarry activities are adequately controlled. Grace Pacific will continue to utilize best management practices and will adjust such practices where necessary to avoid impacts on neighboring properties. Additionally, Grace Pacific will continue monitoring noise, vibration, and dust levels to ensure that such levels are within acceptable limits and will continue to email its focus group participants in the community to provide feedback on blasting activities.

8.1.3 Proposed Use Will Not Unreasonably Burden Public Agencies

As discussed in section 6 and 7, *supra*, the proposed changes will not unreasonably burden public agencies. In summary, the proposal will not require additional public infrastructure or substantially burden existing infrastructure. Operational efficiencies realized from expanded operating hours and extended access to locally-produced aggregates are expected to benefit public agencies through reduced material costs for paving projects.

8.1.4 Unusual Conditions Have Arisen Since District Boundaries Were Established

In approving the Special Use Permit in 1973 and the quarry expansion in 2008, the LUC recognized the uniqueness of the quarry and its importance in development of infrastructure on O'ahu. The extension of the permit to 2047 and the expansion of the quarry operating hours, which are based on new identification of resources and changing market demand, would result in continued local production of A-Grade and B-Grade aggregate, thereby reducing the need to import aggregate from other

locations (including the mainland) and avoiding transportation and other costs associated with importing aggregate or transporting aggregate from quarries that are situated further from worksites. See Exhibit Y at 21-23.

Additionally, approximately 50 percent of paving work done by the City and County of Honolulu occurs between 6:00 p.m. and 6:00 a.m. Expanding quarry operations, including the production of ready-mix concrete and hot-mix asphalt, to 24 hours a day to accommodate this timeframe would reduce transportation and storage costs for aggregate, concrete, and hot-mix asphalt.

8.1.5 Unsuitable Site Conditions for Designated State Land Use

All proposed quarry uses under this application will take place in the quarry excavation area on Parcel 74 or the former excavation area on Parcel 82. As these sites have been or are being excavated, they are not suited for agricultural activity. Moreover, as noted above in section 4.5, the upper quarry predominantly consists of stony steep lands which contain masses of stones and boulders. The remaining soil on Parcel 74 and Parcel 82 are soils with poor agricultural ratings.

8.2 O‘ahu General Plan

The proposed uses are consistent with the O‘ahu General Plan. The General Plan for the City and County of Honolulu was originally adopted in 1977. An update to the General Plan was recently approved as Resolution 21-23 CD1, effective January 14, 2022. The General Plan is a statement of the long-range physical, social, cultural, economic, environmental, and design objectives for the welfare and prosperity of the people of O‘ahu. It is intended to guide land use and development decisions, and to influence actions in eleven areas of concern, including population; economy; natural environment and resource stewardship; housing and communities; transportation and utilities; energy; physical development and urban design; public safety and community resilience; health and education; culture and recreation; and government operations and fiscal management. The proposed changes are consistent with the General Plan, specifically including Part I (Population), Objective A, Part II (Balanced Economy) Objectives A, C, and E, Part VII (Physical Development and Urban Design).

Objective A of Part I (Population) of the General Plan sets a goal:

To plan for anticipated population in a manner that acknowledges the limits of O‘ahu’s natural resources, protects the environment, and minimizes social, cultural, and economic disruptions.

The proposed changes are consistent with Part I, Objective A for the reasons discussed in section 2.7.1 herein. The quarry provides a critical local source of aggregate, needed to support Hawai‘i’s housing, infrastructure, economic and recreational

needs, among others. Local sources of aggregate are extremely important to Hawai'i, providing significant benefits, as they limit the need to import aggregate from non-local sources, which would result in increased costs to residents and the government, increased stress and burden on Hawai'i's local ports, and reduce the fuel consumption and emissions associated with the unnecessary import of goods to Hawai'i. See Exhibit Y at 21-23. The particular policies of Part I, Objective A served by the proposed changes are:

Policy 1 - Allocate efficiently the money and resources of the City in order to meet the needs of O'ahu's current and future population.

Policy 2 - Provide adequate support facilities to accommodate future numbers of visitors to O'ahu while seeking to minimize disruption to residents and protect the natural environment.

Policy 3 - Seek a balanced pace of physical development in harmony with the City's environmental, social, cultural, and economic goals by effecting and enforcing City regulations.

The goals set by Part II (Balanced Economy) of the General Plan are also served by the changes proposed herein. The relevant goals are:

Objective A - To promote diversified economic opportunities that enable all the people of O'ahu to attain meaningful employment and a decent standard of living

Objective E - To ensure meaningful employment and economic equity.

As noted, in section 7.3, if the proposed changes are approved, Grace Pacific expects to continue to provide long-term, stable employment to its employees at the quarry. Exhibit Y at 14.

Part VII (Physical Development and Urban Design) of the General Plan set various goals to create active and vibrant communities on the island of O'ahu. This necessarily requires the construction of community infrastructure, businesses, homes, and roads, sidewalks, and bicycle paths. The continuation of a local, centralized, source of aggregate is vital to the fulfillment of all goals set forth in Part VII.

8.3 'Ewa Development Plan

The 'Ewa Development Plan's long-range vision for property near the quarry is primarily for low-density residential and agricultural and preservation uses. The quarry site is located within the Community Growth Boundary. The 'Ewa Development Plan defines the Community Growth Boundary as follows:

The Community Growth Boundary defines and contains the intended extent of developed or “built up” areas of urban and urban fringe communities. Its purpose is to provide adequate land to support established or developing communities while protecting lands outside this boundary for agriculture or open space values. **Areas within this boundary are generally characterized by extensive tracts of residential, commercial, industrial, or mixed-use development clearly distinguishable from undeveloped or more “natural” portions of a region's environment**

‘Ewa Development Plan at A-19 (emphasis added). Accordingly, the quarry use is consistent with the plan. In addition, quarry use on Parcels 74 and 82 is specifically provided for in the plan. *Id.* at A-9, A-17.

8.4 Hawai‘i State Plan

The Hawai‘i State Plan was set forth by the Hawai‘i State Planning Act, which was signed into law in 1978 and codified under the Hawai‘i Revised Statutes. Chapter 226. The plan is a long-range comprehensive plan that identifies goals, objectives, policies, and priorities for the state. The plan is divided into three parts, in which the first part identifies the overall theme, goals, objectives, and policies of the state. The listing on the following pages identifies the objectives and policies that are met by the proposed changes.

HRS Chapter 226 Section	Applicability
<p>§ 226-5. Objective and policies for population</p> <p>(a) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.</p>	Applicable
<p>(b)(1): Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.</p> <p><i>Response: Continued extraction of local aggregate is critical to accomplishing the State's goal of appropriate growth.</i></p>	Applicable
<p>(b)(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.</p> <p><i>Response: Grace Pacific supplies neighboring islands with aggregate and aggregate products which are necessary to complete growth projects.</i></p>	Applicable
<p>(b)(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.</p> <p><i>Response: Over its long history, Grace Pacific has prided itself as providing long-term and fulfilling employment to the residents of the State of Hawai'i.</i></p>	Applicable
<p>(b)(4) Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population.</p>	Not Applicable
<p>(b)(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.</p>	Not Applicable

HRS Chapter 226 Section	Applicability
(b)(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.	Not Applicable
<p>(b)(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.</p> <p><i>Response: The proposed changes are consistent with the General and 'Ewa Development Plans and are consistent with the fact that the land on Parcels 74 and 82 are largely not suitable for agricultural use.</i></p>	Applicable
<p>§ 226-6. Objectives and policies for the economy--in general</p> <p>(a) Planning for the State's economy in general shall be directed toward achievement of the following objectives:</p> <p>(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.</p> <p>(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.</p>	Applicable
(b)(1) Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State.	Not Applicable
(b)(2) Expand Hawaii's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.	Not Applicable

HRS Chapter 226 Section	Applicability
<p>(b)(3) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.</p> <p><i>Response: Continued extraction of local aggregate keeps the cost of aggregate down and passes those savings onto individuals, the government, and other industries.</i></p>	Applicable
<p>(b)(4) Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.</p> <p><i>Response: Continued extraction of local aggregate reduces reliance on out-of-state aggregate suppliers thereby maintaining the industry for further innovation and economic opportunity for Hawai'i's residents.</i></p>	Applicable
<p>(b)(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii.</p>	Not Applicable
<p>(b)(6) Seek broader outlets for new or expanded Hawaii business investments.</p>	Not Applicable
<p>(b)(7) Expand existing markets and penetrate new markets for Hawaii's products and services.</p>	Not Applicable
<p>(b)(8) Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation.</p> <p><i>Response: Continued extraction of local aggregate is critical to reducing Hawai'i's reliance on imported aggregate. Should Hawai'i become reliant exclusively on imported aggregate, disruptions in supply chains could be devastating to industries reliant upon aggregate.</i></p>	Applicable
<p>(b)(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.</p>	Applicable

HRS Chapter 226 Section	Applicability
<p><i>Response: Continued extraction of local aggregate is critical to accomplishing the State's goal of appropriate growth.</i></p>	
<p>(b)(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors.</p>	Not Applicable
<p>(b)(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.</p> <p><i>Response: Over its long history, Grace Pacific has prided itself as providing long-term and fulfilling employment to the residents of the State of Hawai'i. Grace Pacific offers employment that is both labor-intensive and not labor-intensive but each contribute to the economy of Hawai'i.</i></p>	Applicable
<p>(b)(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.</p> <p><i>Response: Over its long history, Grace Pacific has prided itself as providing long-term and fulfilling employment to the residents of the State of Hawai'i. Grace Pacific offers employment that is both labor-intensive and not labor-intensive but each contribute to the economy of Hawai'i.</i></p>	Applicable
<p>(b)(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.</p> <p><i>Response: Grace Pacific regularly supplies and works on State and municipal projects throughout the islands. Continued operation of the Makakilo Quarry is vital to those operations.</i></p>	Applicable

HRS Chapter 226 Section	Applicability
<p>(b)(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.</p> <p><i>Response: Continued extraction of local aggregate is critical to numerous industries.</i></p>	Applicable
<p>(b)(15) Maintain acceptable working conditions and standards for Hawaii's workers.</p>	Not Applicable
<p>(b)(16) Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.</p>	Not Applicable
<p>(b)(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.</p>	Not Applicable
<p>(b)(18) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology.</p> <p><i>Response: Continued extraction of local aggregate is critical to numerous industries.</i></p>	Applicable
<p>(b)(19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.</p>	Not Applicable
<p>(b)(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.</p>	Not Applicable
<p>(b)(21) Foster a business climate in Hawaii--including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.</p>	Applicable

HRS Chapter 226 Section	Applicability
<i>Response: Extension of the extraction activities and expansion of the uses and hours in the quarry pit will generate additional GET revenue for the State.</i>	
<p>§ 226-7. Objectives and policies for the economy—agriculture</p> <p>(a) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:</p> <p>(1) Viability of Hawaii's sugar and pineapple industries.</p> <p>(2) Growth and development of diversified agriculture throughout the State.</p> <p>(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.</p> <p><i>Response: Grace Pacific notes that while this section is not specifically applicable to the proposed changes, the continued extraction of local aggregate supports a wide variety of Hawai'i's industries, including agriculture through the creation and maintenance of infrastructure such as roads and airport runways.</i></p>	Partially-Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p>§ 226-8. Objective and policies for the economy--visitor industry</p> <p>(a) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.</p>	Applicable
(b)(1) Support and assist in the promotion of Hawaii's visitor attractions and facilities.	Not Applicable

HRS Chapter 226 Section	Applicability
(b)(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.	Not Applicable
<p>(b)(3) Improve the quality of existing visitor destination areas by utilizing Hawaii's strengths in science and technology.</p> <p><i>Response: The continued extraction of local aggregate supports a wide variety of Hawai'i's industries, including tourism through the creation and maintenance of infrastructure such as roads and airport runways.</i></p>	Applicable
<p>(b)(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.</p> <p><i>Response: The continued extraction of local aggregate supports a wide variety of Hawai'i's industries, including tourism through the creation and maintenance of infrastructure such as roads and airport runways.</i></p>	Applicable
(b)(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.	Not Applicable
(b)(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.	Not Applicable
(b)(7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.	Not Applicable
(b)(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.	Not Applicable

HRS Chapter 226 Section	Applicability
<p>§ 226-9. Objective and policies for the economy--federal expenditures</p> <p>(a) Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.</p>	Not Applicable
<p>Because the foregoing section is generally not applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable
<p>§ 226-10. Objective and policies for the economy--potential growth and innovative activities</p> <p>(a) Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii's economic base.</p>	Applicable
<p>(b)(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.</p> <p><i>Response: The continued extraction of local aggregate supports a wide variety of Hawai'i's industries through the creation and maintenance of infrastructure such as roads and airport runways.</i></p>	Applicable
<p>(b)(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaii through the export of services or products or substitution of imported services or products.</p> <p><i>Response: The continued extraction of local aggregate supports a wide variety of Hawai'i's industries through the creation and maintenance of infrastructure such as roads and airport</i></p>	Applicable

HRS Chapter 226 Section	Applicability
<i>runways. It also substitutes the need to import aggregate thereby reducing reliance on freight lines and non-local industries.</i>	
(b)(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.	Not Applicable
(b)(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.	Not Applicable
(b)(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus.	Not Applicable
<p>(b)(6) Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people.</p> <p><i>Response: The continued extraction of local aggregate supports a wide variety of Hawai'i's industries through the creation and maintenance of infrastructure such as roads and airport runways.</i></p>	Applicable
<p>(b)(7) Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.</p> <p><i>Response: The continued extraction of local aggregate supports a wide variety of Hawai'i's industries through the creation and maintenance of infrastructure such as roads and airport runways.</i></p>	Applicable

HRS Chapter 226 Section	Applicability
(b)(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste.	Not Applicable
(b)(9) Promote Hawaii's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State.	Not Applicable
(b)(10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawaii's social, economic, physical, and environmental objectives.	Not Applicable
(b)(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.	Not Applicable
(b)(12) Develop, promote, and support research and educational and training programs that will enhance Hawaii's ability to attract and develop economic activities of benefit to Hawaii.	Not Applicable
(b)(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaii.	Not Applicable
(b)(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives.	Not Applicable
(b)(15) Increase research and development of businesses and services in the telecommunications and information industries.	Not Applicable
(b)(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation.	Not Applicable
(b)(17) Recognize and promote health care and health care information technology as growth industries.	Not Applicable

HRS Chapter 226 Section	Applicability
<p>§ 226-10.5. Objectives and policies for the economy--information industry</p> <p>(a) Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region.</p>	Not Applicable
<p>Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable
<p>§ 226-11. Objectives and policies for the physical environment--land-based, shoreline, and marine resources</p> <p>(a) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:</p> <p>(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.</p> <p>(2) Effective protection of Hawaii's unique and fragile environmental resources.</p>	Applicable
<p>(b)(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai'i's natural resources with the need to extract material necessary to construct vital infrastructure.</i></p>	Applicable
<p>(b)(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.</p>	Not Applicable
<p>(b)(3) Take into account the physical attributes of areas when planning and designing activities and facilities.</p>	Applicable

HRS Chapter 226 Section	Applicability
<p><i>Response: The proposed changes would occur on parcels that are already subject to quarrying activities. Thus, at present, they are only suitable for continued quarry activities. Grace Pacific has submitted a detailed Beneficial Reuse Plan detailing how the area will be restored to a reusable state following closure of the quarry.</i></p>	
<p>(b)(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai‘i’s natural resources with the need to extract material necessary to construct vital infrastructure. Potential environmental impacts are addressed throughout this application.</i></p>	Applicable
<p>(b)(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.</p>	Not Applicable
<p>(b)(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.</p>	Not Applicable
<p>(b)(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.</p>	Not Applicable
<p>(b)(8) Pursue compatible relationships among activities, facilities, and natural resources.</p> <p><i>Response: The quarry supplies numerous State and municipal projects throughout the islands.</i></p>	Applicable
<p>(b)(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.</p>	Not Applicable
<p>§ 226-12. Objective and policies for the physical environment—scenic, natural beauty, and historic resources</p>	Applicable

HRS Chapter 226 Section	Applicability
(a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.	
<p>(b)(1) Promote the preservation and restoration of significant natural and historic resources.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai'i's natural resources with the need to extract material necessary to construct vital infrastructure. Potential environmental impacts are addressed throughout this application. No impacts on historical resources are anticipated and Grace Pacific has prepared a Cultural Impact Assessment, Literature Review and Field Inspection, and Archaeological Inventory Survey to confirm that no such impacts will occur. Grace Pacific is actively working with SHPD to address any concerns it may have.</i></p>	Applicable
(b)(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	Not Applicable
<p>(b)(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai'i's views and vistas with the need to extract material necessary to construct vital infrastructure. Potential view impacts have been addressed throughout this application. Grace Pacific has prepared a detailed final grading plan, which includes renaturalization of the slopes of Pu'u Makakilo affected by mining activities.</i></p>	Applicable
(b)(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.	Not Applicable
<p>(b)(5) Encourage the design of developments and activities that complement the natural beauty of the islands.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai'i's views and vistas with the need to extract material necessary to construct vital infrastructure. Potential view impacts</i></p>	Applicable

HRS Chapter 226 Section	Applicability
<p><i>have been addressed throughout this application. Grace Pacific has prepared a detailed final grading plan, which includes renaturalization of the slopes of Pu‘u Makakilo affected by mining activities.</i></p>	
<p>§ 226-13. Objectives and policies for the physical environment—land, air, and water quality</p> <p>(a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:</p> <p>(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.</p> <p>(2) Greater public awareness and appreciation of Hawaii's environmental resources.</p>	<p>Applicable</p>
<p>(b)(1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.</p>	<p>Not Applicable</p>
<p>(b)(2) Promote the proper management of Hawaii's land and water resources.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai‘i’s natural resources with the need to extract material necessary to construct vital infrastructure. Potential environmental impacts are addressed throughout this application.</i></p>	<p>Applicable</p>
<p>(b)(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.</p>	<p>Not Applicable</p>
<p>(b)(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.</p> <p><i>Response: The proposed changes balance the need to conserve Hawai‘i’s air quality with the need to extract material necessary to construct vital infrastructure. Potential environmental</i></p>	<p>Applicable</p>

HRS Chapter 226 Section	Applicability
<i>impacts are addressed throughout this application. No adverse effects on air quality are expected.</i>	
(b)(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.	Not Applicable
(b)(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.	Not Applicable
(b)(7) Encourage urban developments in close proximity to existing services and facilities.	Not Applicable
(b)(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors.	Not Applicable
<p>§ 226-14. Objective and policies for facility systems--in general</p> <p>(a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, sustainable development, climate change adaptation, sea level rise adaptation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.</p>	Applicable
<p>(b)(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.</p> <p><i>Response: The proposed changes are consistent with the General and 'Ewa Development Plans and are consistent with the fact that the land on Parcels 74 and 82 are largely not suitable for agricultural use.</i></p>	Applicable
(b)(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.	Not applicable

HRS Chapter 226 Section	Applicability
<p>(b)(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.</p> <p><i>Response: A continued local source of aggregate is vital to keeping the cost of aggregate down, which will result in savings upon the construction of future projects.</i></p>	Applicable
<p>(b)(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.</p> <p><i>Response: A continued local source of aggregate is vital to keeping the cost of aggregate down, which will result in savings upon the construction of future projects.</i></p>	Applicable
<p>(b)(5) Identify existing and planned state facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards.</p>	Not Applicable
<p>(b)(6) Assess a range of options to mitigate the impacts of sea level rise to existing and planned state facilities.</p>	Not Applicable
<p>§ 226-15. Objectives and policies for facility systems--solid and liquid wastes</p> <p>(a) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:</p> <p>(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.</p> <p>(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.</p>	Not Applicable

HRS Chapter 226 Section	Applicability
Because the foregoing section is generally not applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p>§ 226-16. Objective and policies for facility systems—water</p> <p>(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.</p>	Not Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p>§ 226-17. Objectives and policies for facility systems--transportation</p> <p>(a) Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:</p> <p>(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.</p> <p>(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.</p> <p><i>Response: Grace Pacific notes that while this section is not specifically applicable to the proposed changes, the quarry provides a local source of aggregate that is vital to the development and maintenance of transportation infrastructure and facilities.</i></p>	Partially-Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable

HRS Chapter 226 Section	Applicability
<p>§ 226-18. Objectives and policies for facility systems—energy</p> <p>(a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:</p> <p>(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;</p> <p>(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation;</p> <p>(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;</p> <p>(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and</p> <p>(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.</p>	Not Applicable
<p>Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable
<p>[§ 226-18.5]. Objectives and policies for facility systems—telecommunications</p> <p>(a) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.</p>	Not Applicable
<p>Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable

HRS Chapter 226 Section	Applicability
<p>§ 226-19. Objectives and policies for socio-cultural advancement—housing</p> <p>(a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:</p> <p>(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more rental and for sale affordable housing is made available to extremely low-, very low-, lower-, moderate-, and above moderate-income segments of Hawaii's population.</p> <p>(2) The orderly development of residential areas sensitive to community needs and other land uses.</p> <p>(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.</p>	Not Applicable
<p>Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable
<p>§ 226-20. Objectives and policies for socio-cultural advancement—health</p> <p>(a) Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:</p> <p>(1) Fulfillment of basic individual health needs of the general public.</p> <p>(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.</p> <p>(3) Elimination of health disparities by identifying and addressing social determinants of health.</p>	Not Applicable

HRS Chapter 226 Section	Applicability
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p data-bbox="132 378 1367 412">§ 226-21. Objective and policies for socio-cultural advancement—education</p> <p data-bbox="132 448 1656 557">(a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.</p>	Not Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p data-bbox="132 706 1430 740">§ 226-22. Objective and policies for socio-cultural advancement—social services</p> <p data-bbox="132 776 1656 922">(a) Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.</p>	Not Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p data-bbox="132 1071 1314 1105">§ 226-23. Objective and policies for socio-cultural advancement—leisure</p> <p data-bbox="132 1141 1656 1250">(a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.</p>	Not Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable

HRS Chapter 226 Section	Applicability
<p>§ 226-24. Objective and policies for socio-cultural advancement--individual rights and personal well-being</p> <p>(a) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.</p>	Not Applicable
<p>Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable
<p>§ 226-25. Objective and policies for socio-cultural advancement—culture</p> <p>(a) Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people.</p>	Not Applicable
<p>Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.</p>	Not Applicable
<p>§ 226-26. Objectives and policies for socio-cultural advancement--public safety</p> <p>(a) Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:</p> <p>(1) Assurance of public safety and adequate protection of life and property for all people.</p> <p>(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.</p>	Not Applicable

HRS Chapter 226 Section	Applicability
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.	
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable
<p data-bbox="132 451 1419 483">§ 226-27. Objectives and policies for socio-cultural advancement—government</p> <p data-bbox="132 521 1656 591">(a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:</p> <p data-bbox="132 630 1362 662">(1) Efficient, effective, and responsive government services at all levels in the State.</p> <p data-bbox="132 701 1583 734">(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.</p>	Not Applicable
Because the foregoing section is not specifically applicable, the specific policies set forth in the foregoing section are also not applicable.	Not Applicable

9. EXHIBITS

Exhibit A	Location Map
Exhibit B	DPP Findings of Fact, Conclusions of Law, and Decision and Order, 2007/CUP-91
Exhibit C	March 23, 1973 Memorandum Approving SP73-147
Exhibit D-1	Quarry TMK Map
Exhibit D-2	Palailai Landfill SUP Map
Exhibit D-3	Quarry SUP Area Map
Exhibit E	Existing Conditions
Exhibit F	Findings of Fact, Conclusions of Law, and Decision and Order Approving with Modifications the Recommendation of the City and County of Honolulu Planning Commission to (1) Extend the Life of the Makakilo Quarry Resource Extraction and Aggregate Processing Operations to 2032; and (2) Expand the Resource Extraction and Buffer Areas of the Quarry
Exhibit G-1	Map of Proposed Reshaped Mining Area
Exhibit G-2	Map of 2022 Aerial Imagery of Quarry Overlaying 2010 Site Plan
Exhibit G-3	Map of 2022 Aerial Imagery of Quarry Overlaying 2010 Site Plan and Proposed Revisions to Boundaries
Exhibit H-1	2032 Final Closure Grading Plan
Exhibit H-2	Map of 2022 Aerial Imagery of Quarry Overlaying 2010 Site Plan and 2032 Final Closure Grading Plan
Exhibit I	Proposed Final Grading Plan
Exhibit J	Aggregate Estimates for Reshaped Mining Area
Exhibit K	Minutes of the August 24, 2022 Neighborhood Board Meeting
Exhibit L	Map of Adjoining Uses
Exhibit M	Map of Current Structures and Proposed Site Plan
Exhibit N	Mobility Analysis Report

Exhibit O	Map of Firebreak Roads
Exhibit P	View Planes Analysis
Exhibit Q	Biological Survey Report for Proposed Makakilo Quarry Expansion
Exhibit R-1	Map Showing Drainage Basins and Flow of Water
Exhibit R-2	Drainage Report
Exhibit R-3	Storm Water Pollution Prevention Plan
Exhibit S	Cultural Impact Analysis
Exhibit T	Literature Review and Field Report
Exhibit U	Noise Impact Report
Exhibit V	Lighting Assessment Report
Exhibit W	Dust Evaluation Report
Exhibit X	Vibration Monitoring Summary
Exhibit Y	Makakilo Quarry Socio-Economic Impact Assessment
Exhibit Z	Archaeological Inventory Survey