

MAKAKILO QUARRY SPECIAL USE PERMIT APPLICATION

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STATE OF HAWAII
LAND USE COMMISSION



Land Use Commission
Public Hearing
August 21, 2024



MAKAKILO QUARRY

Began operating in 1973

Source of A-grade and B-grade rock used in making concrete, asphalt, and fill

Supplies about 1,000,000 tons of aggregate a year

All quarry output stays in Hawai'i

The Benefits of the Quarry

- Millions of tons of aggregate are needed every year to meet O‘ahu construction and paving needs
- Even with Makakilo Quarry and two other quarries on O‘ahu, material still needs to be imported
- A local source of stone benefits the local economy by ensuring the resources necessary for public and private projects, reducing import costs, keeping the investment in Hawai‘i, enabling on-site customer service, and providing local jobs for the community.
- The quarry is in a central location, which reduces the cost to transport materials to job sites
- Without local quarries, we would need to import materials from Canada and the mainland United States

The Quarry Parcels

Three Parcels

Parcel 82 and 74 are mauka of the H-1 and is the current site of the quarry pit (which includes processing areas), excavation areas, berms, and buffer area

Parcel 4 is the former processing area and is now maintained as open landscaping

All parcels are in the State Land Use Agricultural District

Parcel 82 and 74 are zoned AG-2 and Parcel 4 is zoned AG-1



Google Earth, Airbus, Date: 6/10/2019



Quarry Operations

Aggregate is mined

Rock is transferred to finishing plants

Finished aggregate is either sold or processed into asphalt or concrete

Grace Pacific also receives asphalt and concrete from job sites to be recycled and reused

Approximately 100,000 tons are recycled per year

Recycling reduces carbon footprint and prolongs the life of a limited and vital resource



Why are we here today?

- Grace Pacific is requesting amendments to the Special Use Permit. The modifications include:
 - Extending the Special Use Permit by 15 years to align with the amount of known material reserves and extend the life of this resource;
 - Adjusting the shape of the area permitted for mining operations;
 - Modifying existing operating hours to allow 24-hour asphalt and concrete production, sales in the pit of the quarry, receiving of recycle material, and maintenance; and
 - Approving a Ready-Mix Concrete Plant in the quarry pit

Extending the Special Use Permit

- Current Special Use Permit expires on December 31, 2032
- As of 2018, there was approximately 15 million tons of aggregate left in the current excavation area
- Grace Pacific estimates that there is 12.8 million tons of aggregate in the proposed expansion area
- Together, these reserves could continue to provide O'ahu with a local source of aggregate until 2047
- We are also asking to revise the permit to confirm that a ready-mix concrete plant is permissible in the pit

Adjusting the Approved Mining Area

Adjust boundaries of approved excavation area to access a seam of high-quality rock on the NW/W rim

Goes with extension of permit

15.6 acres to be added to excavation area

To compensate, 15.6 acres of area approved for berming, landscaping, and grading and excavation would be converted into buffer zone

Increase in linear distance of buffer area

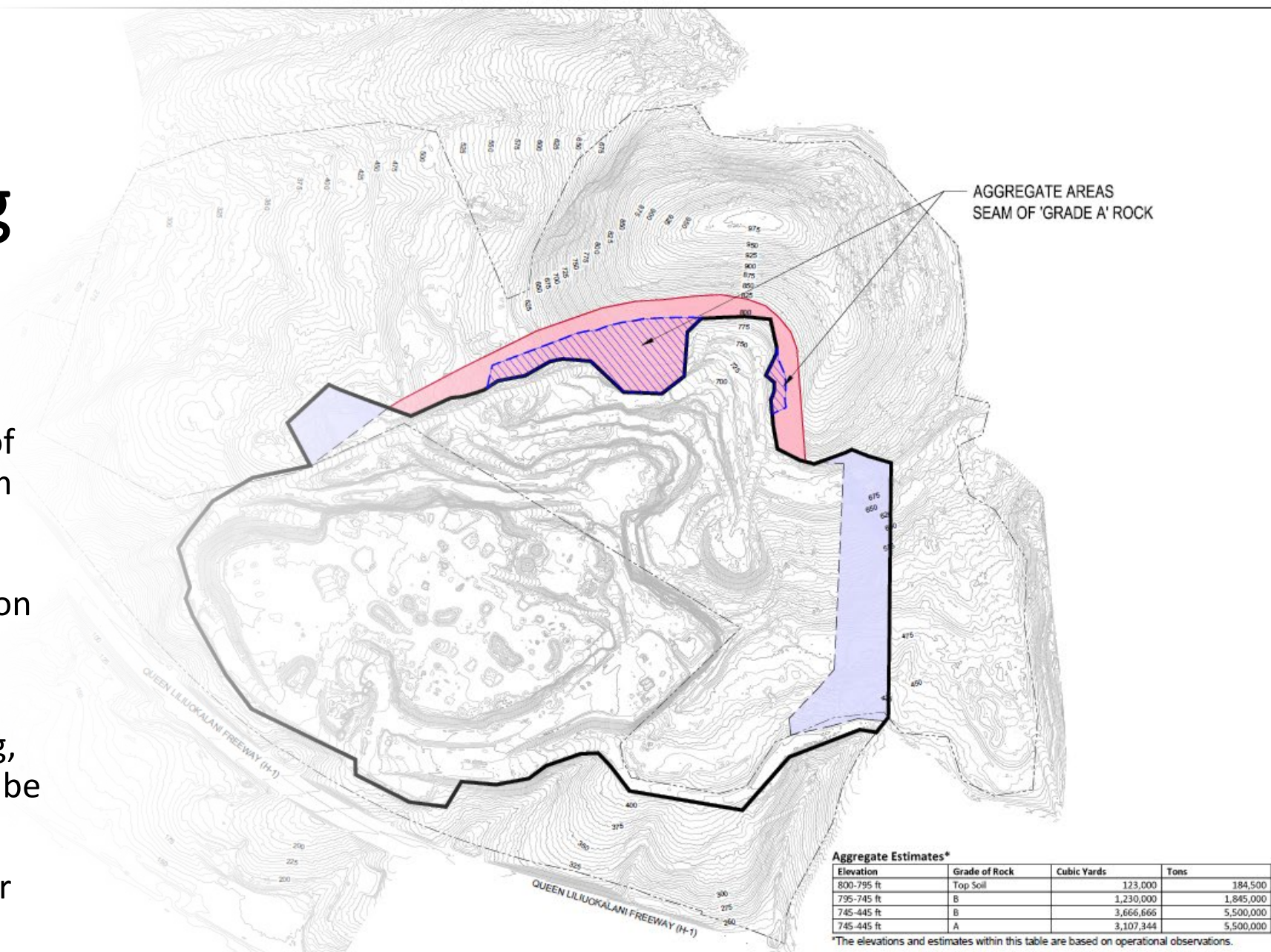
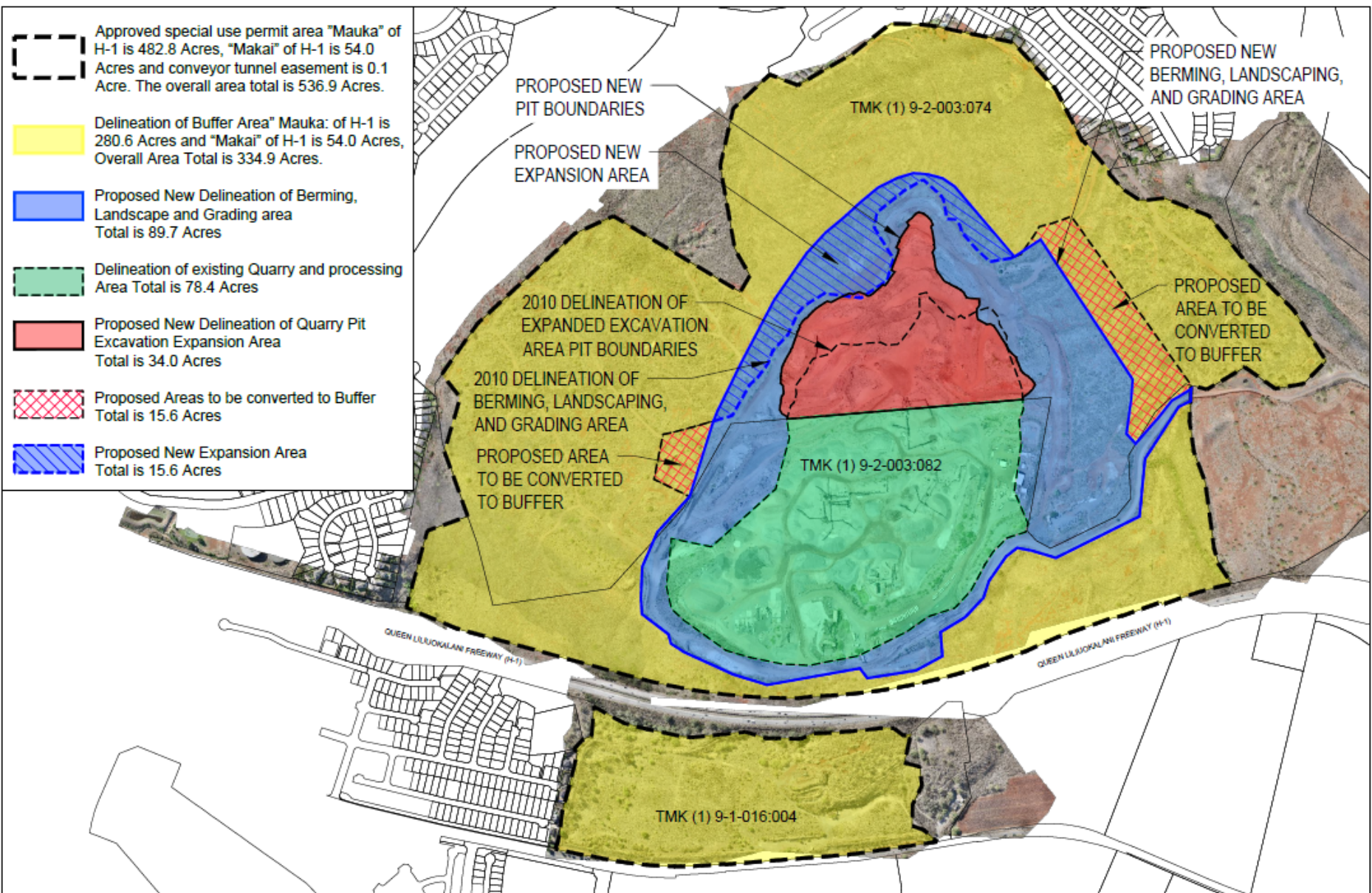


Exhibit "J"

AGGREGATE ESTIMATES

October 12, 2022



Aerial Imagery date: September 29, 2022

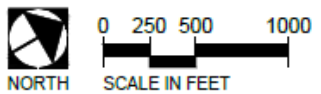


Exhibit "G-3"

Makakilo Quarry
PROPOSED EXPANSION AREA
January 2023

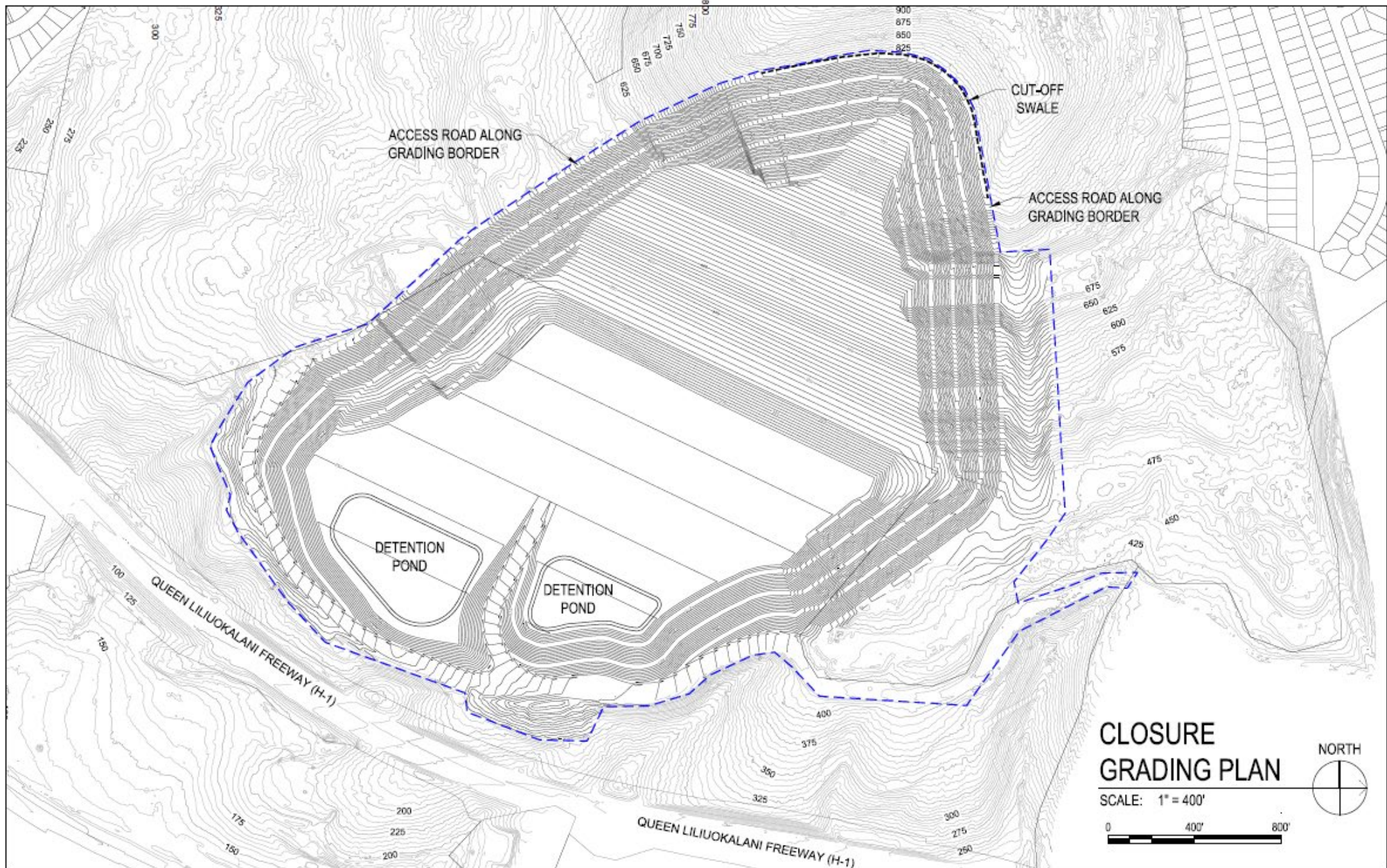


Exhibit "I"

Expanding Operating Hours

Grace Pacific is only seeking to expand operating hours for limited activities

It is **not** asking to blast, drill, excavate or crush at night

The expansion of permissible operating hours would only apply to making and selling asphalt and concrete, maintaining equipment, and receiving recycle material

Parcel	Activity	Existing Hours	Proposed Hours
82 (Processing Site)	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	Unrestricted to allow for nighttime operations
	Maintenance	3:00 p.m. to 6:00 p.m., Monday to Saturday	Unrestricted to allow for nighttime operations
	Receiving of permitted recycle materials	6:00 p.m. to 10:00 p.m., Sunday to Friday	Unrestricted to allow for nighttime operations
	Operation of hot-mix asphalt plant	6:00 a.m. to 6:00 p.m., Monday to Friday	Unrestricted to allow for nighttime operations
82	Operation of ready-mix concrete	Not Listed in Condition No. 5 of D&O and Modification No. 4 of this Application	Unrestricted to allow for nighttime operations
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

Expanding Operating Hours

50% of the City and County paving work supplied by the quarry occurs between 6:00 p.m. and 6:00 a.m.

Ready-mix concrete and hot-mix asphalt must be used in a short period of time after processing

Currently, aggregate needs to be trucked off-site to be processed in Campbell Industrial Park.

That increases costs and results in unnecessary truck traffic, which increases wear and tear on the road and emissions

Allowing processing at night 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



Commitment to Being a Good Neighbor

- Grace Pacific began working with consultants early in the process to ensure that the changes being sought can be implemented without adversely affecting its neighbors
- The Application is supported by studies of potential project effects in the areas of:
 - Dust
 - Noise
 - Vibrations
 - Traffic
 - Biological Resources
 - View planes
 - Lighting
 - Cultural Resources and Practices
 - Archaeological Sites
 - Socioeconomic Effects
- Pu‘u Makakilo and the quarry pit act as barriers for the homes nearest to the quarry
- Scott Komatsu, Vice President, Materials, Grace Pacific and consultants for dust (Vincent Yanagita, Environmental Risk Analysis), noise (Dana Dorsch, CENSEO), view planes and socioeconomic effect (Jared Chang, Bowers and Kubota), grading (Albert Rivera), and cultural resources and archaeological sites (Dr. Mara Mulrooney) present to answer questions

The Planning Commission's Findings

- **Same Standard:**

- HRS § 205-6 allows the “county planning commission to permit certain unusual and reasonable uses within the agricultural and rural districts other than those for which the district is classified. The county planning commission may, under such protective restrictions as may be deemed necessary, permit the desired use, but only when the use would promote the effectiveness and objective of this chapter.”

- **Same Five Guidelines**

- Guideline 1: Such use shall not be contrary to the objectives sought to be accomplished by the state land use law and regulations.
- Guideline 2: The desired use would not adversely affect surrounding property.
- Guideline 3: The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, school improvements, and police and fire protection.
- Guideline 4: Unusual conditions, trends, and needs have arisen since the district boundaries and regulations were established.
- Guideline 5: The land upon which the proposed use is sought is unsuited for the uses permitted within the district

Guideline 1: Such use shall not be contrary to the objectives sought to be accomplished by the state land use law and regulations.

“Based on the evidence presented before the Commission, the preponderance of the evidence establishes that the proposed use would not be contrary to the objectives sought to be accomplished by the state land use law and regulations. Specifically, HRS ch. 205 seeks to ensure continued availability of land for agricultural use. It also recognizes some lands in the state Agricultural district may not be suitable for the uses permitted in the district and provides relief through the special permit process. **The area proposed for expansion of resource excavation does not exhibit a high capacity for intensive agricultural cultivation due to unfavorable soil classifications, topography, climate, and water availability.**”

Planning Commission Decision and Order, Conclusions of Law ¶ 6.

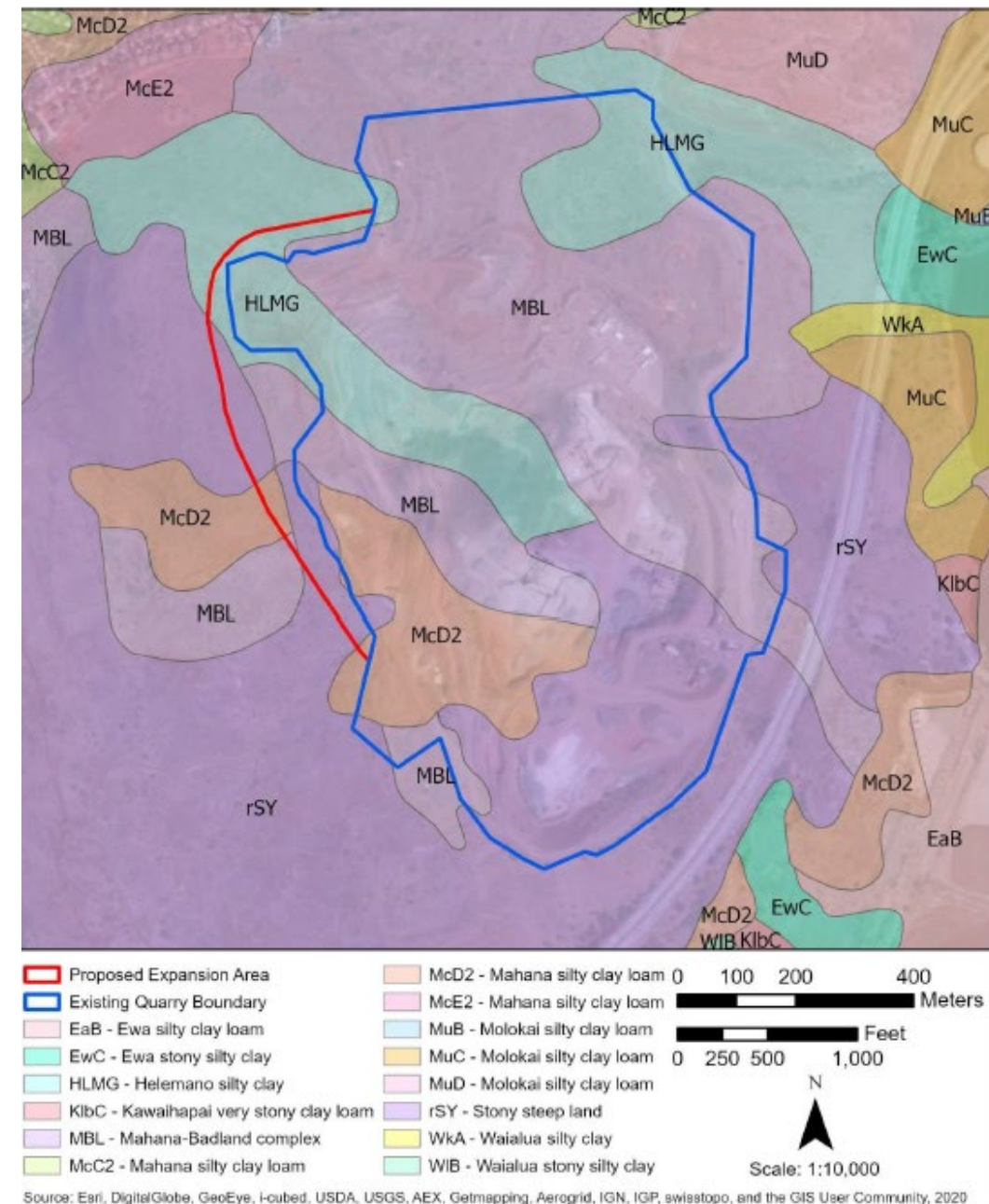


Figure 7. Map of soil types within the vicinity of the Makakilo Quarry Proposed Expansion Project Area (data from Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, 2022).

Guideline 2: The desired use would not adversely affect surrounding property.

“Based on the evidence presented before the Commission, the preponderance of the evidence establishes that the desired use would not adversely affect surrounding properties. As noted above, the Application included numerous studies relating to potential effects on surrounding properties. The studies evaluated the potential impacts that are typically associated with quarry activity, including dust, noise, vibrations, lighting, traffic, and view planes. **The Commission determines that the proposed Project, with mitigative conditions in place, would not adversely affect surrounding property.**”

Planning Commission Decision and Order, Conclusions of Law ¶ 7.



Guideline 3: The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, school improvements, and police and fire protection

“Based on the evidence presented before the Commission, the preponderance of the evidence establishes that **the proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, school improvements, and police and fire protection.**”

Planning Commission Decision and Order, Conclusions of Law ¶ 8.



Guideline 4: Unusual conditions, trends, and needs have arisen since the district boundaries and regulations were established

“Based on the evidence presented before the Commission, **the preponderance of the evidence establishes that unusual conditions, trends, and needs have arisen since the district boundaries and regulations were established.** As noted above, Makakilo Quarry plays an important role in supplying local aggregate on O‘ahu. The quarry is in a centralized location and is able to supply aggregate and aggregate products to job sites while incurring lower transportation costs than other local quarries or from imported aggregate sources. With approximately 50 percent of paving work done on O‘ahu occurring 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 result in: (a) eliminating dump truck trips between the quarry and Campbell Industrial Park and (b) lower asphalt and concrete costs for road and building projects. These conditions, trends, and needs have arisen since the district boundaries and regulations were established., water, drainage, school improvements, and police and fire protection.”

Planning Commission Decision and Order, Conclusions of Law ¶ 9.

Guideline 5: The land upon which the proposed use is sought is unsuited for the uses permitted within the district

“Based on the evidence presented before the Commission, the preponderance of the evidence establishes that the land on which the proposed use is sought is unsuited for the uses permitted within the district. The State Department of Agriculture did not provide comments on the Application. Expansion of the excavation area further up Pu‘u Makakilo would not have an adverse impact on the agricultural industry as the Project site and expansion area’s soils have poor crop productivity ratings. Lands to the east of the pit and along the lower slopes of the Pu‘u continue to be available for cattle grazing. It is likely that intensive agricultural use of the mauka site is no longer possible due to a significant disturbance of topsoil due to resource extraction and processing activities. Thus, **the proposal would have little to no adverse effect on the agricultural suitability of the site as it has poor potential for agricultural uses.**”

Planning Commission Decision and Order, Conclusions of Law ¶ 10.

Conditions

- Conditions from 2007 SUP will carry over as modified.
 - New site plan
 - Revised Closure Grading Plan
 - Continued annual reporting to DPP and LUC.
 - Revisions to conditions consistent with amendments included in the application (permit end date, hours of operation, concrete batch plant)

Conditions

- Five new conditions
 - Nighttime outdoor lighting plan
 - Operations restrictions relating to 'ōpe'ape'a (restricted tree trimming, no use of barbed wire)
 - Traffic circulation plan and use of white noise reversing alarms for nighttime operations.
 - AIS must be accepted by SHPD before quarrying in the expansion area.
 - Compliance with all laws relating to any historic properties and burials identified within the excavation expansion area.
- Grace Pacific agrees with all conditions recommended by the Planning Commission

Staff Notes

- LUC staff notes that the Honolulu Planning Department and Planning Commission recommend **approval** of the application.

LUC Staff report at 5-6.

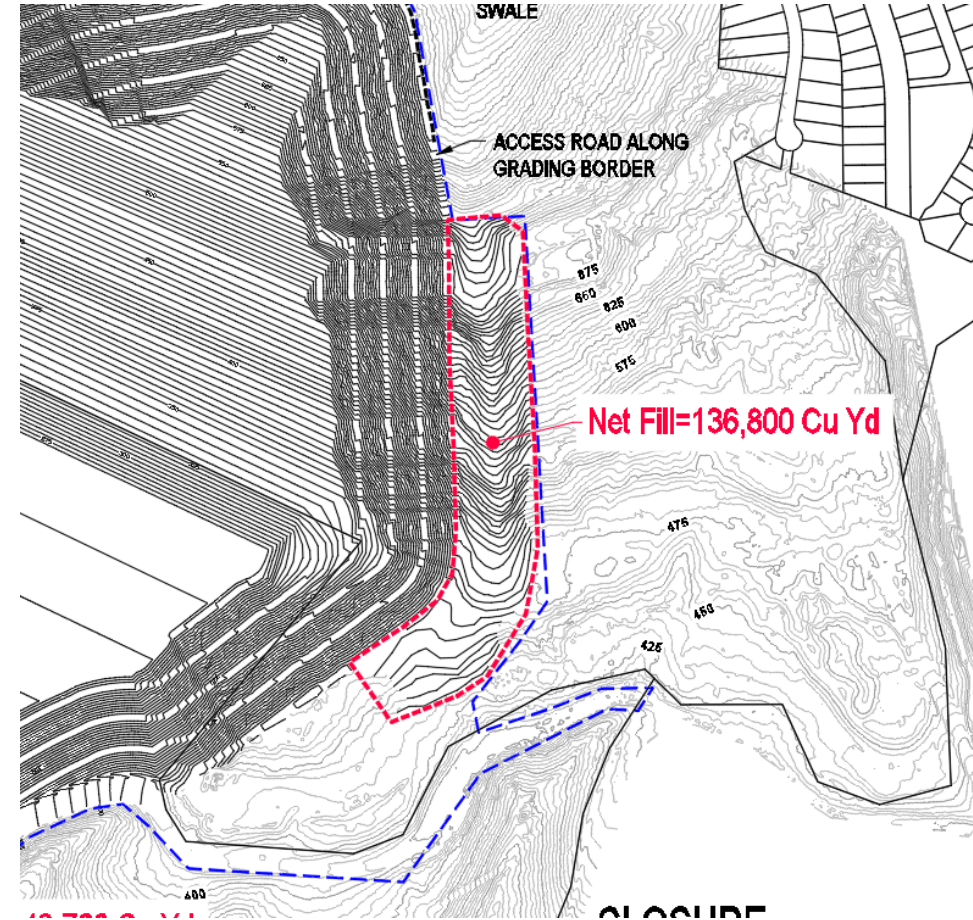
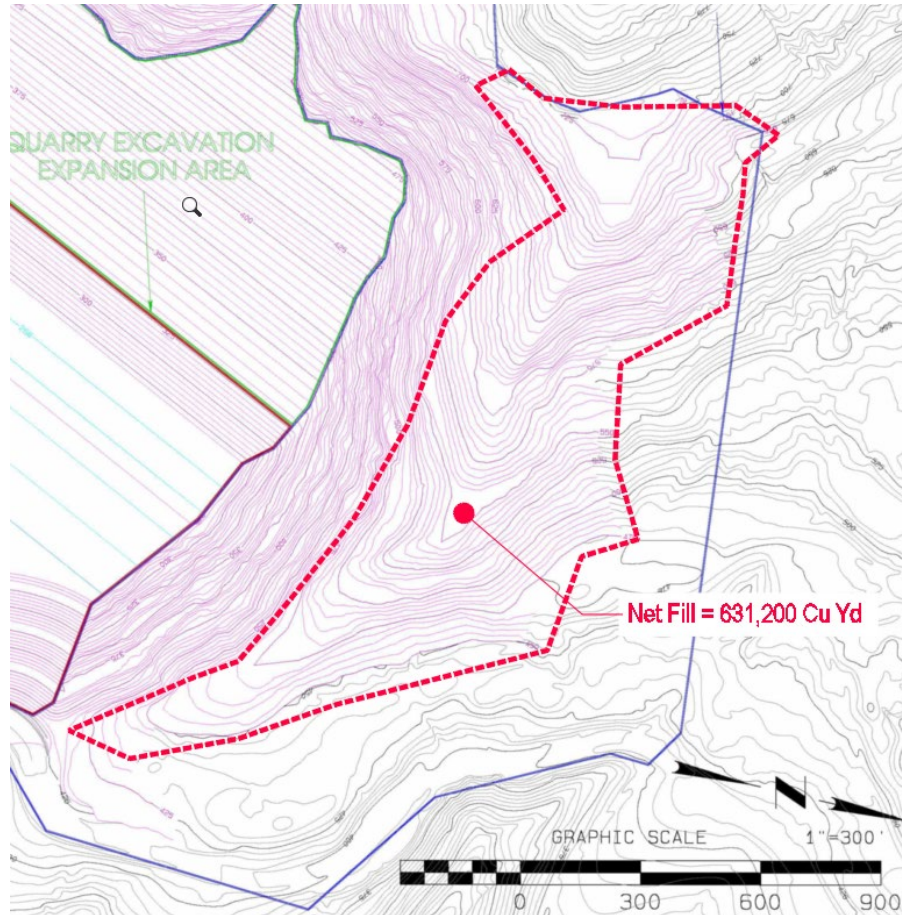
OPSD Recommendation

- OPSD recommended approval of the application.
 - OPSD Letter dated August 14, 2024 at 1.
- Proposed certain revisions to Condition #2 relating to the Kunia Berm and the Final Grading Plan.

OPSD's proposed changes to Condition #2

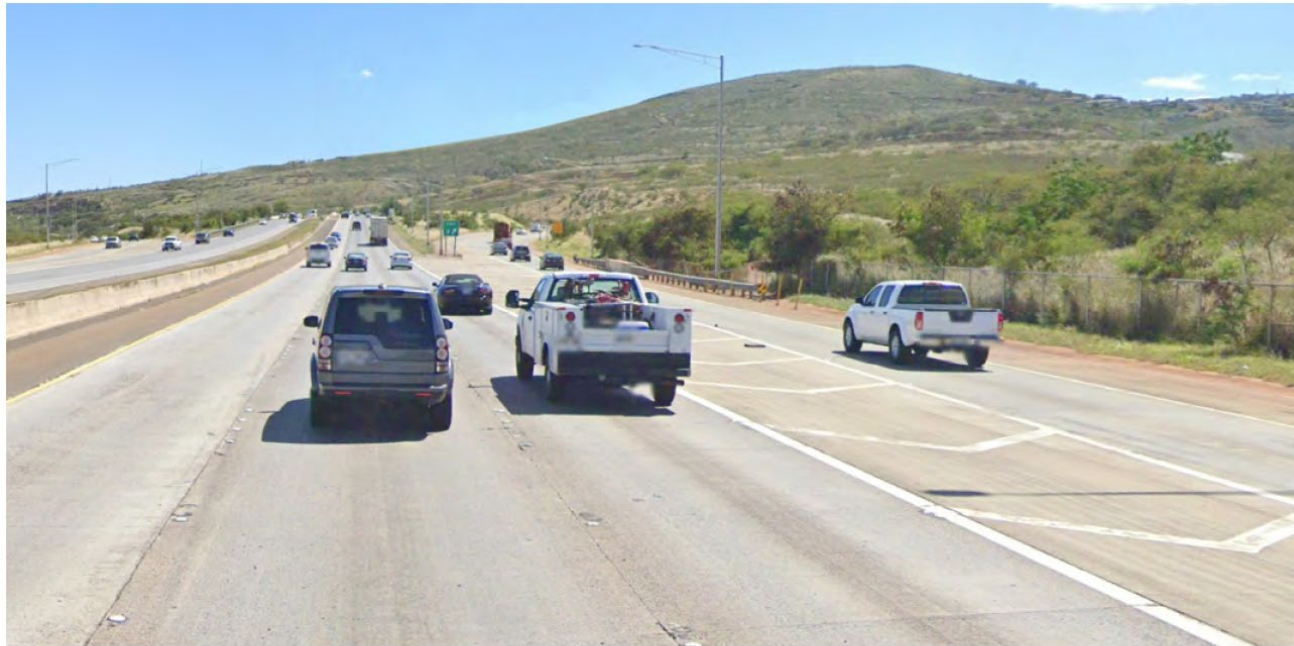
Within one (1) year of the Land Use Commission's Decision and Order approving the Special Use Permit, the Applicant shall submit to the Director of Planning and Permitting for review and approval a renaturalization plan in coordination with a revised ~~final~~ Closure Grading Plan, showing a visual model of quarry activity in five-year stages from ~~all four approaches to the quarry~~ five (5) public lines of sight: the H-1 Freeway westbound, the University of Hawai'i at West O'ahu, the Salvation Army Kroc Center, the Kanehili subdivision, and Kealani Avenue. The revised grading plan should ~~shall~~ provide cross-sections of the pit displaying slopes ~~and elevations~~ no greater than 75 percent slope, along with elevations of landforms that blend into the surrounding topography. The specifications described in the 2008 Findings of Fact No. 40, shall be carried forward into the revised grading plan. ~~The grading plan should also show landscaping details including plant types, sizing and spacing, irrigation facilities, and distribution systems~~ The revised Site Plan shall be established from the approved revised final grading plan.

Berm Style Comparison – 494,400 cu yd ~\$3,460,800 of additional cost





Existing Conditions View from H-1 Highway



Simulated view after closure and renaturalization from H-1 Highway

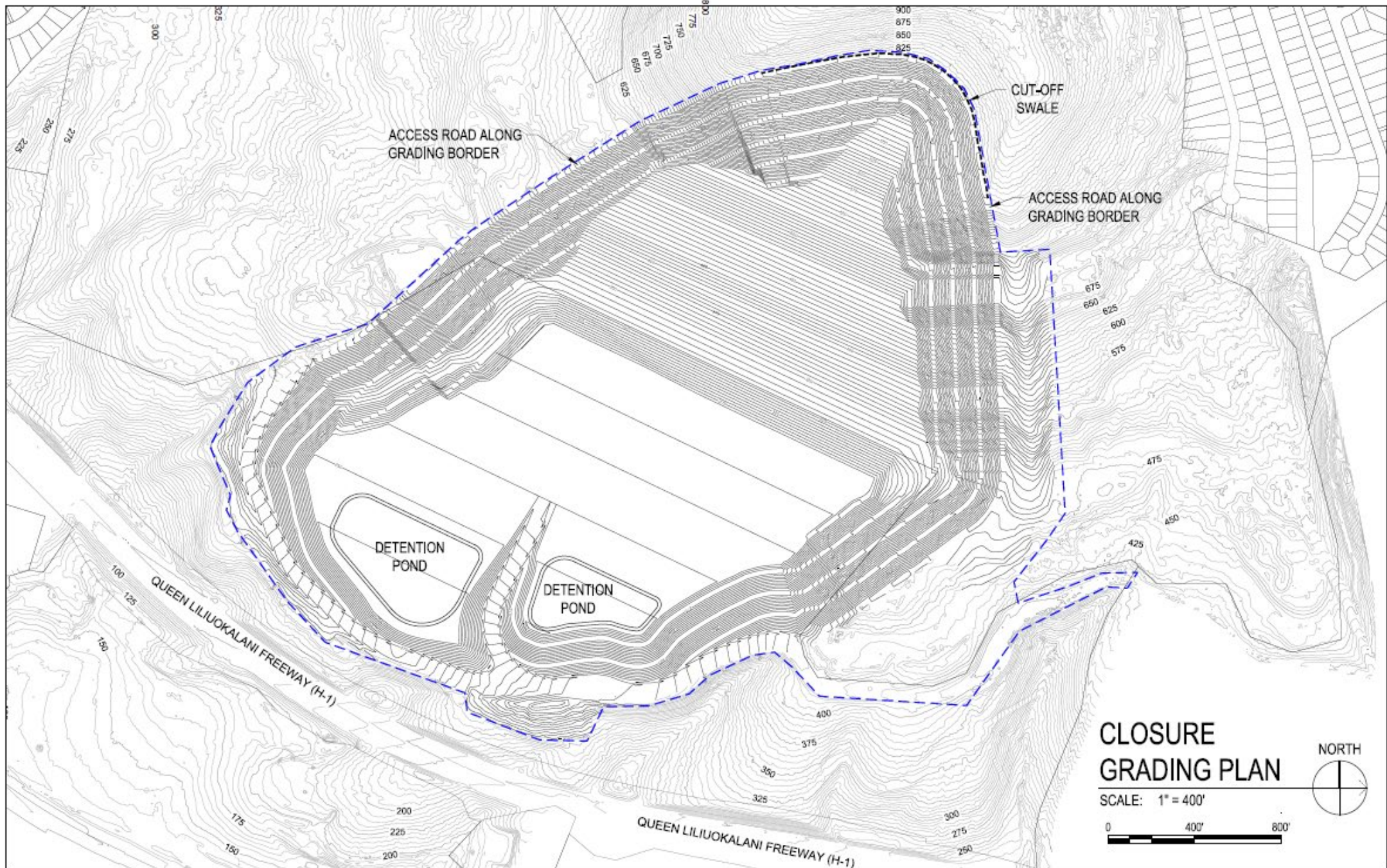


Exhibit "I"

Untitled Map
Write a description for your map.

Legend



Google Earth

Image © 2024, Airphoto
Data: USGS, NOAA, NCEM, NGA, A
Data: ETO, NOAA, U.S. Navy, NGA, GEBCO
Data: SRTM30 PLUS



300 ft

Community Questions

- Grace Pacific has made presentations at three neighborhood board meetings relating to this application.
- It also maintains a Community Hotline that members of the public can call to ask questions or raise concerns about the quarry.
 - (808) 671-GRACE (671-4722).
- The community has raised questions about:
 - Rockface Carving
 - Noise
 - Safety
 - Vibrations
 - Dust
 - Access Road

Community Questions: Carving

- Basalt rock not suitable for large detailed carving
- No suitable view plane angle
- No large vertical cuts
- Not necessary
- Not appropriate



Simulated view after closure and renaturalization from the Salvation Army Kroc Center



Existing conditions view from the Salvation Army Kroc Center

Community Questions: Noise

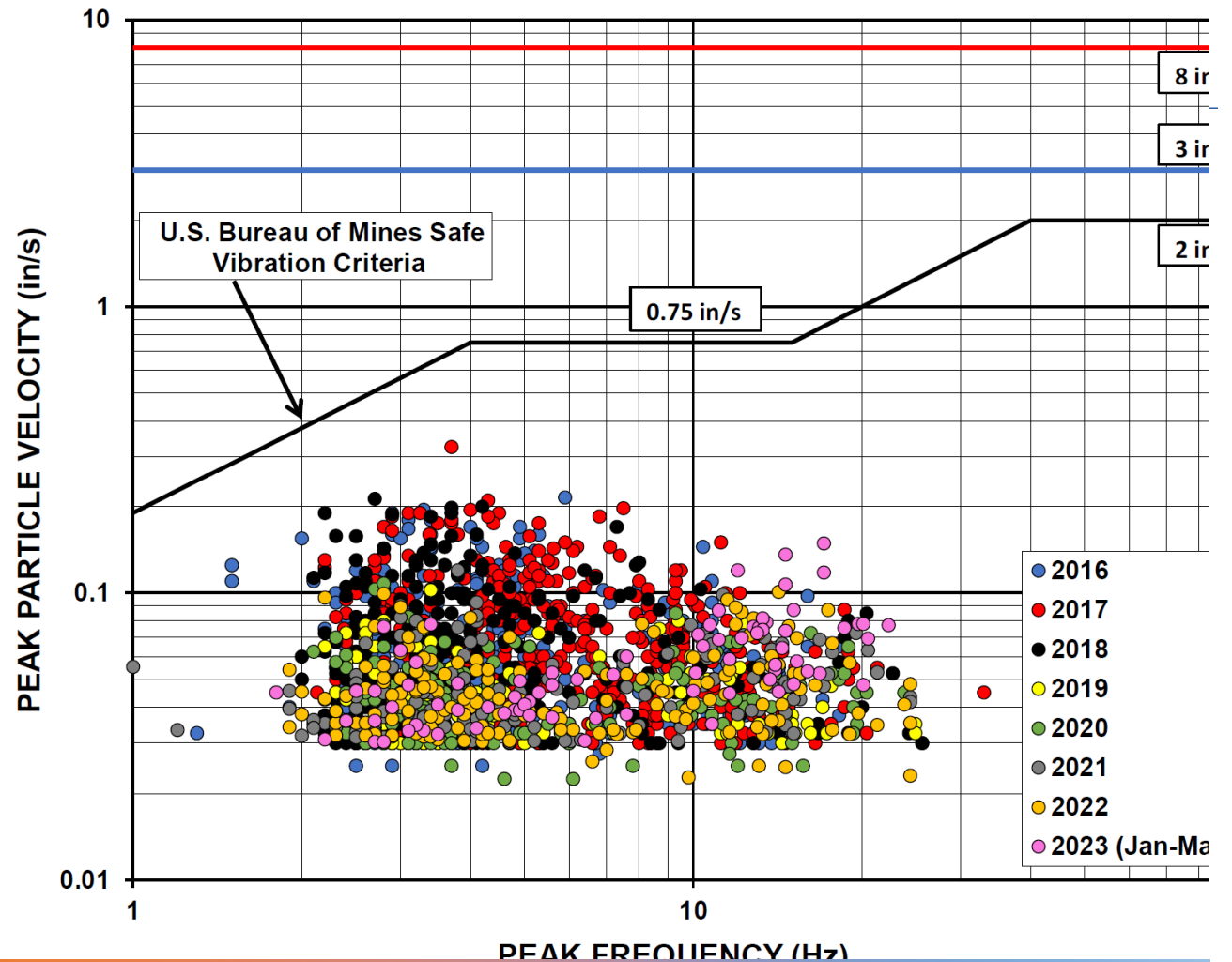
- Planning Commission Order ¶ 76:
 - **The Noise Impact Study concludes that the Project will comply with the Department of Health maximum permissible noise limits under Hawai'i Administrative Rules, Title 11, Chapter 46. It also concludes that any noise generated by the proposed uses will be quieter than the existing ambient noise in surrounding residential areas and, therefore, noise from the proposed uses will not be audible from these residential areas. It further concludes that **Pu'u Makakilo provides the neighborhoods to the north and northwest with a natural barrier that blocks audible noises emanating from the quarry.** The Department conducted phone conversations with residents from the Wai Kalo'i and Anuhea subdivisions and reported that these conversations validate the Noise Impact Study's conclusion that Pu'u Makakilo serves as an effective noise barrier for residential subdivisions to the north and northwest.**

Community Questions: Safety

- Grace Pacific takes safety very seriously
 - **“There have been no reported rockfall events associated with vibrations from drilling, blasting, or other quarry operations that have affected the surrounding residential properties during the life of the quarry.”**
 - Planning Commission Order ¶ 85
 - “The Applicant is subject to State Department of Health regulations governing air quality.”
 - Planning Commission Order ¶ 82
 - Asphalt plant is already approved in the quarry pit, has a Covered Source Permit and is subject regular stack tests to ensure emissions are within regulatory limits.

Community Questions: Vibrations

- “A Vibration Monitoring Summary prepared by Detecht LLC was attached to the Application as Exhibit X. The report contained conservative guidelines for blasting charge weight that scales depending on the distance to the closest residence. **Those guidelines allow blasters at the quarry to adjust charge weights to ensure that there is no risk of damage to property.**”
 - Planning Commission Order ¶ 86
- “The frequency-based safe vibration criteria, as recommended by the U.S. Bureau of Mines (USBM) is shown in this figure as a black line, established by the USBM as the 100% confidence limit to safe vibrations during rock blasting (Siskind et al., 1980).”
 - Application s. X at 1.



Community Questions: Dust

- “On a site visit, Department staff observed the standard practice of spraying the blast area with water before and after a blast. Staff also observed a water truck spraying internal roads and the watering of stockpiled aggregate.”
- “A Dust Evaluation Report prepared by Environmental Risk Analysis LLC was attached as Exhibit W to the Application. The report concluded that with the proposed changes to the Project, dust concentrations at 1/4 mile away, which is the distance to the closest residence, would not exceed National Ambient Air Quality Standards.”
- Planning Commission Order ¶¶ 82-83



Community Questions: Emergency Access

- Grace Pacific is actively engaged in talks with the City and County and other landowners to come to an agreement to provide emergency access to the Makakilo community.
- Because providing emergency access affects and involves several landowners, a permit condition is not an appropriate mechanism to achieve it.
- Grace Pacific will continue to work with the City and County and other landowners to reach an agreement to provide access.s



Mahalo