



ORIGINAL

July 7, 2008  
2004.33.8000 / 08P-244

Mr. Henry Eng, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street, 7th Floor  
Honolulu, HI 96813

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STATE OF HAWAII  
LAND USE COMMISSION

DEPT. OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU

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ATTN: Raymond Young

Dear Mr. Eng:

**Application to Amend Special Use Permit File No. 72/SUP-1  
Makakilo Quarry – Response to Comments**

On behalf of Grace Pacific, we are providing the following items as discussed with Mr. Raymond Young on June 24 and June 27, 2008:

- 1) Recap of Recent Submittals. A brief recap of how the content of the recent submittals of April 21st, May 23rd, June 6th and June 20th differs from the original application.

The Application as accepted as complete on November 9, 2007, contemplated the following:

- New Excavation Area - Use of a total of 48 acres of Parcel 74 for two purposes: active quarrying (33 acres) and visual mitigation landscaping (15 acres).
- Expanded Buffer Zone - Set aside of a total of 393 acres as a buffer zone between active quarrying and the adjacent properties; (Parcel 82, 115 acres and Parcel 74, 278 acres). Existing buffer zone is 178 acres. Net increase in buffer area = 215 acres.
- No Change to Operations on Parcel 82 - Continued use of Parcel 82 for excavation, hauling and primary crushing; along with continued operation of concrete and asphalt recycling plant.
- No Change to Operations on Parcel 4 - Continued use of Parcel 4 for finish crushing, hot-mix asphalt production, ready-mix concrete production, scale house, maintenance shop and administrative office.
- Dump Truck Traffic - Parcel 4 = 80-85 round trips daily, accessing Farrington Highway at the entrance to Parcel 4. Parcels 82 and 74 = 80-85 round trips daily accessing Farrington Highway at Palehua Road. Upon completion of the North-South/H-1 Interchange, Parcels 82 and 74 would have direct freeway access.

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- Visual Mitigation - Balancing the ridges of the Pu'u by lowering the Makakilo ridge by 75 feet and constructing a 75-foot-high berm on the Kunia ridge. The quarry "face" on the Makakilo side would be gently sloped to appear non-man-made, while the mauka and Kunia quarry faces would be of the traditional bench and vertical face appearance of a quarry.
- Duration of Operations - The operations on Parcels 4, 82 and 74 would continue for 25 years, or to the year 2032. Thereafter, several years would be necessary for removal of plant and equipment and the renaturalization of those areas.

Subsequent to November 2007, Grace Pacific's discussions with DPP and Grace Pacific's residential neighbors focused on the impact to residential neighborhoods from the operations on Parcel 4 and the visual appearance of the final quarried landform. Grace Pacific and DPP have agreed that conditions be placed upon the approval of the Application to give effect to the following:

- New Excavation Area - Use of a total of 65 acres of Parcel 74 for active quarrying (21 acres of quarry floor, with a large portion of the difference from the 33 original acres now characterized as mitigation landscaping) and visual mitigation landscaping (44 acres).
- Expanded Buffer Zone - The area of the proposed buffer zone remains the same, a total of 393 acres.
- Operations on Parcel 82 - In addition to the continued use of Parcel 82 for excavation, hauling, primary crushing and aggregate recycling, within three years of approval, the following operations from Parcel 4 would be set up on Parcel 82: finish crushing, weekday operation of the hot mix asphalt plant, a maintenance shop for quarry equipment and an operations field office.

The hours of operation on Parcel 82 will remain the same after the relocation of the operations presently conducted on Parcel 4. Typically, excavation and crushing occurs from Monday through Saturday between the hours of 6 a.m. to 3:30 p.m. Blasting typically occurs four or five times a week between the hours of 8 a.m. and 12 noon. Sales from Parcel 82 will be limited to the hours of 7 a.m. to 4:30 p.m. Cleanup and maintenance will be scheduled from 3 p.m. to 6 p.m. Occasional night shift paving jobs will require incoming hauling (6 p.m. to 1 a.m.) for asphalt pavement rubble.

- Operations on Parcel 4 - Within three years of approval, all operations on Parcel 4 would cease. Both weekday and weekend/night operations of the hot-mix asphalt plant would shift to Campbell Industrial Park (CIP) for the first three years, and thereafter this plant would be used for night and weekend work. The weekday operation of the hot-mix asphalt plant would be re-established in the third year on Parcel 82. The ready-mix concrete plant and the maintenance shop for construction equipment would move

to CIP by the end of the third year. Following the shutdown of operations, an estimated three years would be necessary to dismantle, clean up, grade and establish ground cover on Parcel 4. It is estimated that Parcel 4 would be returned to the landowner, the James Campbell Company, by the year 2015.

- Operations on Parcel 74 - There is no change in the use of Parcel 74, the excavation of rock, under the recent submittals.
- Dump Truck Traffic - With the move of operations from Parcel 4 and the North South/H-1 Interchange being placed in service, within three years of approval, all truck traffic to and from Parcels 82 and 74 would have direct freeway access at the new interchange. Farrington Highway would no longer be used for access to any of the quarry or processing operations.
- Visual Mitigation - The balancing of the ridges of the Pu'u remains central to the visual mitigation plan. In addition, Grace proposes (1) to renaturalize the "bowl" of the Pu'u, an additional six-acre area that the former golf developer had mass graded in anticipation of becoming a driving range, and (2) to extend the berm on the Kunia side to the pad of the former golf clubhouse, an additional area of 9 acres.

The most notable change of the recent submittals is the Revised Grading Plan of June 2008, under which the quarry "face" on all three sides, the Makakilo side, mauka and Kunia, would be gently sloped and textured to appear non-man-made. The gentler slopes would also more readily accommodate renaturalization. The quarrying process will change, taking advantage of highly accurate GPS systems to create the final landform as part of the excavation process. Under the Revised Grading Plan approximately 1 million cubic yards of material is not being excavated, when compared to the original application.

- Duration of Operations - The operations on Parcel 4 would continue for three years, to the year 2011. Thereafter, several years would be necessary for removal of plant and equipment (approximately one year) and the renaturalization of those areas (approximately two years).

The operations on Parcels 82 and 74 would continue for 24 years, or to the year 2032. Thereafter, several years would be necessary for removal of plant and equipment and the renaturalization of those areas.

- 2) Kunia Berm Use and Extension. Clarification on the storage of explosives and the benefits of extending the berm further mauka.

The berm on the Kunia side, as proposed in the Application accepted November 9, 2007, extended mauka to the 625-foot elevation. Under the latest proposal, the berm continues up the ridgeline to the 725-foot elevation. This is done for visual purposes not related to quarrying; essentially repairing the break in the ridgeline created by the grading cuts for the placement of the former golf clubhouse.

Following a similar line of thinking, the current modifications envision creating landforms in the bowl of the Pu'u, in the elevations from 700 to 750 feet, mimicking the ridges and gullies that existed prior to the golf driving range grading done in the early 1990s.

As to the storage of explosives, the berm will not be used to store explosives. The magazines are being moved from the ridge on the western corner of the existing quarry (Parcel 82) to the floor on the northern corner for security reasons.

- 3) Truck Traffic Routing. The following describes the truck traffic routing to and from the Quarry Site, Lower Processing Site and Campbell Industrial Park, now, with the North South/H-1 Interchange under construction, and after the Interchange is completed:
- Upper Quarry to CIP (today and in the future) - The truck route from the Upper Quarry (Parcel 82) to Campbell Industrial Park (CIP) today and upon completion of the North South /H-1 Interchange (estimated to be December 2008), will follow Palehua Road to the interchange, then enter the H-1 westbound, exit H-1 at the Palailai (Exit #1) and follow Kalaeloa Boulevard south into CIP.
  - CIP to Upper Quarry (through December 2008) - The truck route from CIP to the Upper Quarry today is from Kalaeloa Boulevard onto the H-1 at the Palailai Interchange, then exiting the H-1 at the Kunia Interchange, turning left onto Kunia road, then turning left back onto the H-1 heading westbound, getting off at the North South/H-1 Interchange off ramp to Palehua Road and following Palehua Road to the quarry.
  - CIP to Upper Quarry (after December 2008) - The truck route from CIP to the Upper Quarry upon completion of the North South /H-1 Interchange will be from Kalaeloa Boulevard onto the H-1 at the Palailai Interchange, then exiting H-1 at the North South/H-1 Interchange Kunia Interchange, turning left onto Palehua Road, and following Palehua Road to the quarry.
  - Upper Quarry to Lower Processing Site (through December 2008) - The truck route from the Upper Quarry to the Lower Processing Site (Parcel 4) will be to take Palehua Road to the North South/H-1 Interchange, enter the H-1 westbound, exit at Makakilo Drive (Exit #2), turning left onto Makakilo Drive, then turning left onto Farrington Highway, then turning left into the Lower Processing Site.
  - Upper Quarry to Lower Processing Site (after December 2008) - The truck route from the Upper Quarry to the Processing Site, upon completion of the North South /H-1 Interchange, will be from Palehua Road through the North South/H-1 Interchange heading makai to Farrington Highway, right onto Farrington Highway then right again into the Lower Site. Note that traffic on this route will phase out with the move of operations from the Lower Site in three years.

- Lower Quarry to Upper Quarry (through December 2008) The truck route from the Lower Site to the Upper Quarry today is from Farrington Highway towards Waipahu, left onto Kunia Road, then left onto H-1 westbound, getting off at the North South/H-1 Interchange exit, onto Palehua Road to the Upper Quarry.
  - Lower Quarry to Upper Quarry (after December 2008) - The truck route from the Lower Site to the Upper Quarry upon completion of the North South /H-1 Interchange, will be from Farrington Highway towards Waipahu, left onto the new North South road heading mauka, under the H-1 Freeway, following Palehua Road to the Upper Quarry. Note that traffic on this route will phase out with the move of operations from the Lower Site in three years.
  - CIP to Lower Processing Site (through December 2008, and after December 2008) - The truck route from CIP to the Lower Processing Site today is from Kalaeloa Boulevard, turning right onto Kapolei Parkway, then left onto Kamokila Boulevard, through Kapolei City, following onto Farrington Highway then left into the Lower Site. Note that traffic on this route will phase out with the move of operations from the Lower Site in three years.
- 4) Description of the Benefits of the Revised Grading Plan. The Revised Final Grading Plan dated June 2008 ("Revised Grading Plan") has the following benefits when compared with the Final Grading Plan included in the Application as accepted in November of 2007 ("November 2007 Grading Plan"):
- Minimizing man-made appearance of final landform.
  - Ensuring structural stability of final landform slopes.
  - Greater likelihood of success in renaturalization.
  - Allows for increased excavation in certain areas of quarry floor areas without affecting integrity of final landform.
  - Retains early-on landscape grading and renaturalization efforts, given constraint of available irrigation water.
- 5) Revised Figures, Exhibits. A "Revised Excavation Phasing" plan, Figure 6 in Appendix B of the Engineering Report, a "Revised Renaturalization Matrix," Exhibit 4 in Appendix E, and a "Revised Renaturalization Phasing" Exhibit 5 in Appendix E of the Engineering Report, are attached, each reflecting changes arising from the Revised Grading Plan of June 5, 2008.

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- 6) New Figure of Areas and Acreages. A new "Designation of Areas and Acreages" as Figure 7 for Appendix B of the Engineering Report is included to assist in reviewing this submittal. It is important to emphasize at this point that the acres, volumes and years depicted in the "Excavation and Landscaping Phasing" (Figure 6), the Renaturalization Matrix (Exhibit 4) and Renaturalization Phasing (Exhibit 5) are for illustrative purposes, and that actual market demand will largely drive the actual excavation phasing. While the initial landscape grading described by Areas 1A and 1B will be take place in the 2009-2012 and 2013-2017 periods due to the availability of irrigation water, thereafter the landscape grading will follow actual quarry excavation.
- 7) Revised Table of Contents. The Engineering Report Table of Contents "Appendices" page has been updated to reflect the new Figures 5g and 5h included with the June 20th submittal, and the items described in 5) and 6) above. "Red-line" and "clean" copies are attached.

Thank you for the opportunity to respond to your comments. Should you have any questions about the information provided herein, please call me at 521-5361 or Bob Creps at 674-5201.

Very truly yours,

BELT COLLINS HAWAII LTD.

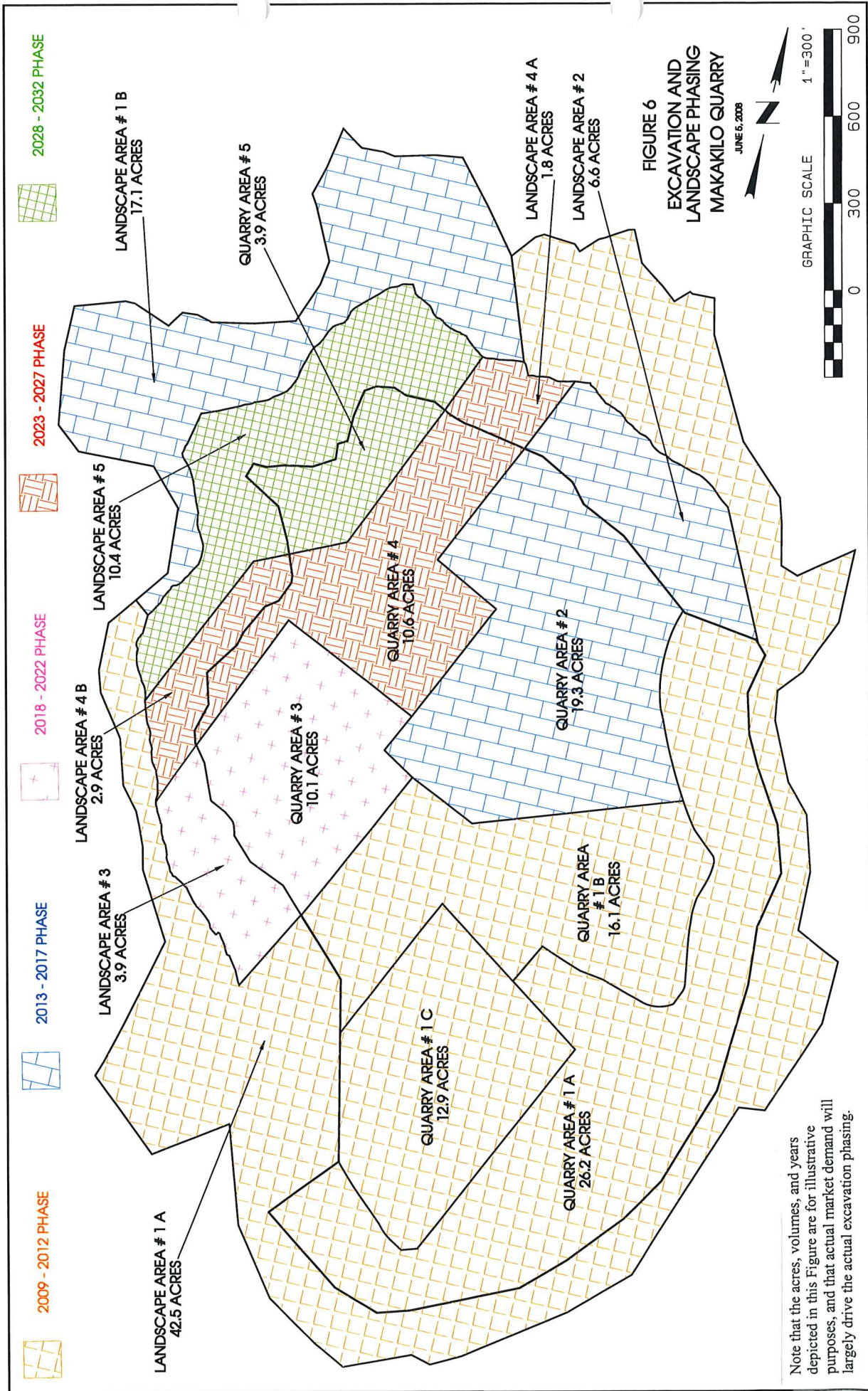


Lee W. Sichter  
Principal Planner

LWS:lf

Attachments

cc: Bob Creps

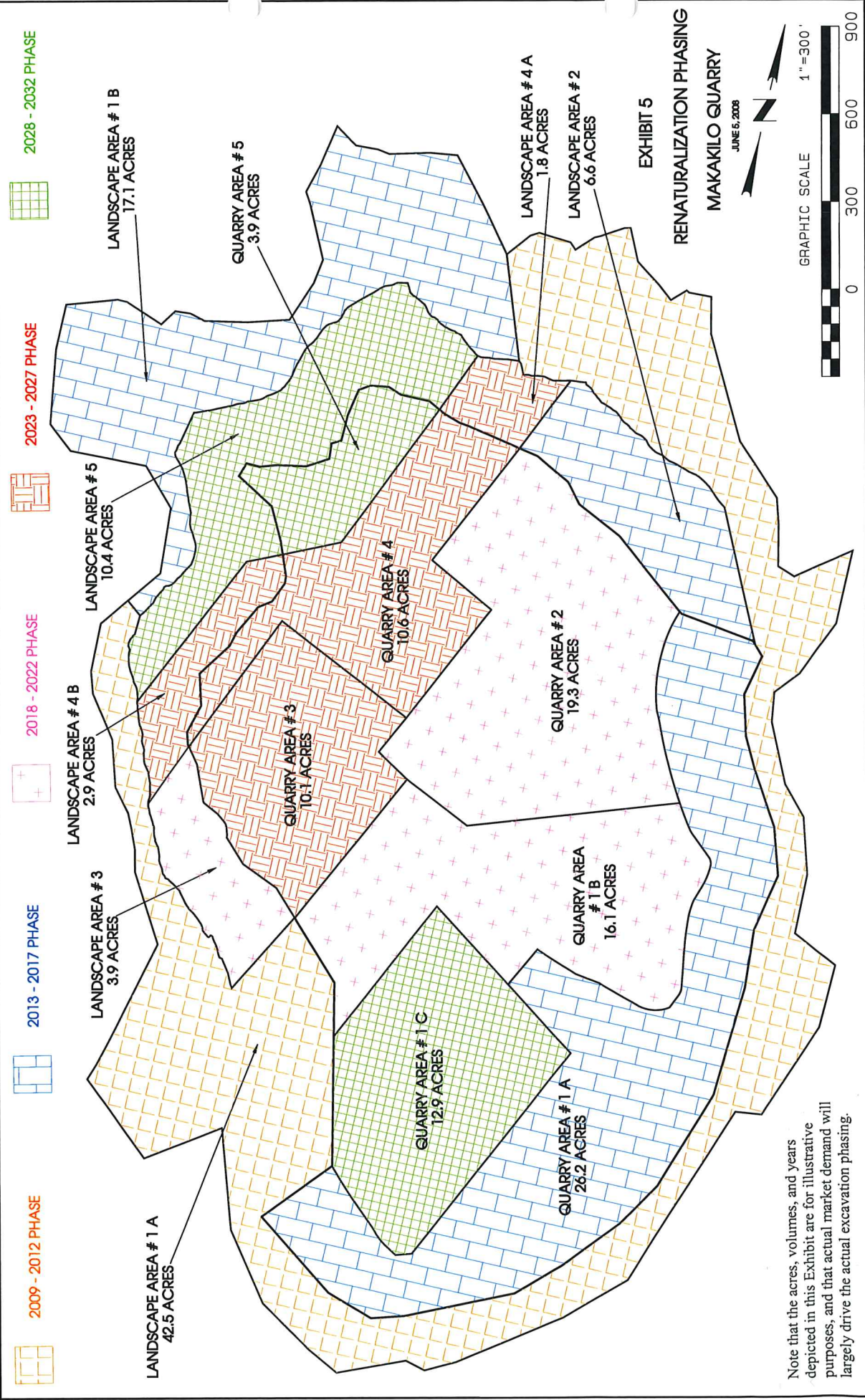


Note that the acres, volumes, and years depicted in this Figure are for illustrative purposes, and that actual market demand will largely drive the actual excavation phasing.

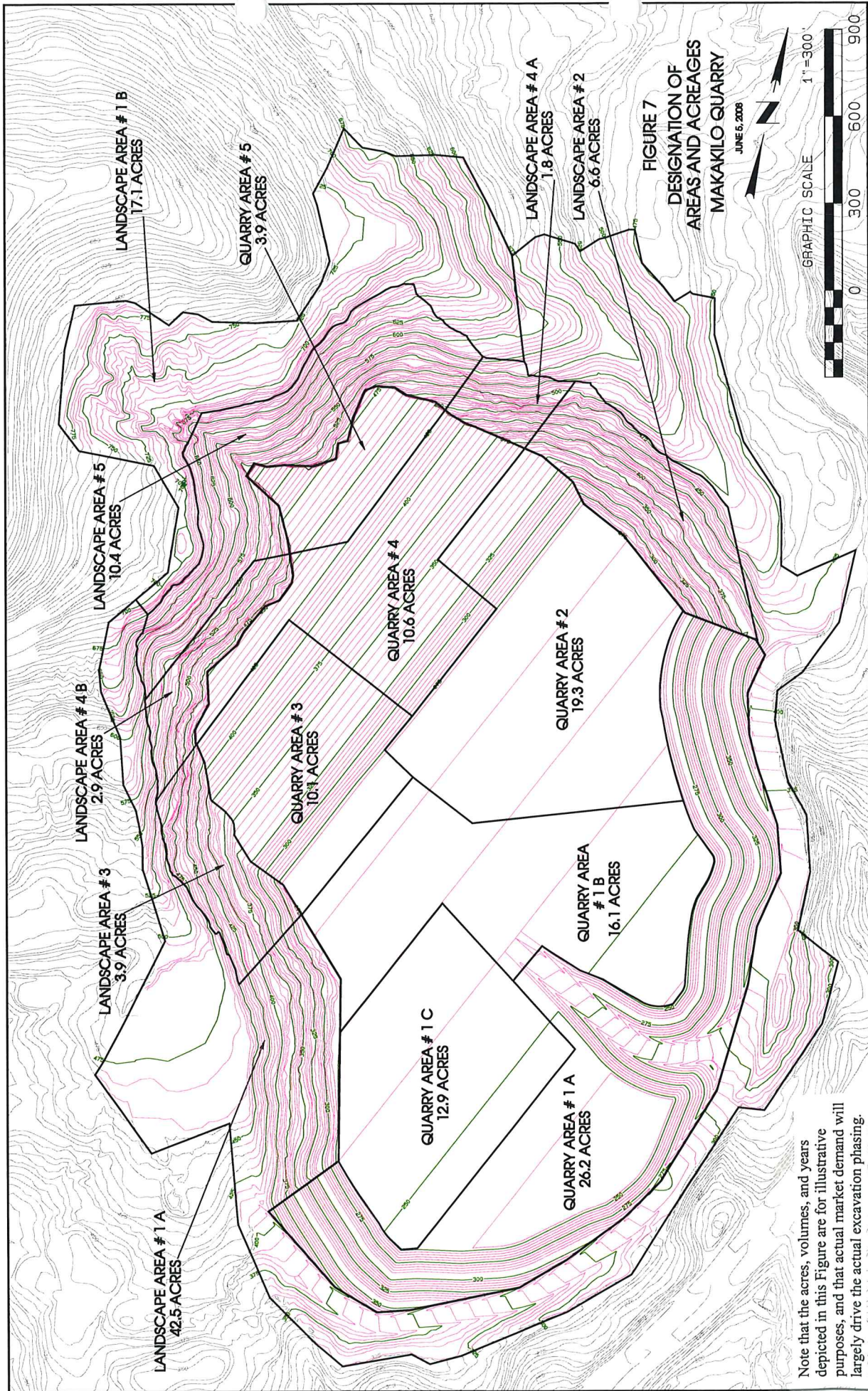
Excavation Plan in 000's of Cubic Yards															total		
Year	1 A	1 B	1 C	2	3	4	5	totals	1 A	1 B	2	3	4 A	4 B	5	totals	quarry and landscape
	quarry								landscape grading								
2009-2012	516	716	457					1,688	750							750	2,438
	(386)	(14)	(9)					(409)	(913)							(913)	(1,322)
2013-2017				2,878				2,878		81	611					692	3,570
								-		(266)	(1)					(266)	(266)
2018-2022					3,093			3,093				793				793	3,885
2023-2027						3,305		3,305					261	560		822	4,127
2028-2032							1,114	1,114							1,243	1,243	2,357
	130	702	448	2,878	3,093	3,305	1,114	11,669	(163)	(185)	610	793	261	560	1,243	3,120	14,790
Excavation Plan in Acres															total		
Year	1 A	1 B	1 C	2	3	4	5	totals	1 A	1 B	2	3	4 A	4 B	5	totals	quarry and landscape
	quarry								landscape grading								
2009-2012	26.2	16.1	12.9					55.2	42.5							42.5	97.7
2013-2017				19.3				19.3		17.1	6.6					23.7	43.0
2018-2022					10.1			10.1				3.9				3.9	14.0
2023-2027						10.6		10.6					1.8	2.9		4.7	15.3
2028-2032							3.9	3.9							10.4	10.4	14.3
	26.2	16.1	12.9	21.3	13.1	14.6	8.9	99.1	42.5	17.1	8.6	6.9	1.8	2.9	15.4	85.2	184.3
Renaturalization Plan in Acres															total		
Year	1 A	1 B	1 C	2	3	4	5	totals	1 A	1 B	2	3	4 A	4 B	5	totals	quarry and landscape
	quarry								landscape grading								
2009-2012								-	42.5							42.5	42.5
2013-2017	26.2							26.2		17.1	6.6					23.7	49.9
2018-2022		16.1		19.3				35.4				3.9				3.9	39.3
2023-2027					10.1	10.6		20.7					1.8	2.9		4.7	25.4
2028-2032			12.9				3.9	16.8							10.4	10.4	27.2
	26.2	16.1	12.9	21.3	13.1	14.6	8.9	99.1	42.5	17.1	8.6	6.9	1.8	2.9	15.4	85.2	184.3
Renaturalization Plan in 000's of gallons per day															total		
Year	1 A	1 B	1 C	2	3	4	5	totals	1 A	1 B	2	3	4 A	4 B	5	totals	quarry and landscape
	quarry								landscape grading								
2009-2012								-	106							106	106
2013-2017	52							52		34	13					47	99
2018-2022		32		39				71				8				8	79
2023-2027					20	21		41					4	6		9	50
2028-2032			26				8	34							21	21	55
	52	32	26	41	23	25	13	198	106	34	15	11	4	6	26	191	389

Note that the acres, volumes, and years depicted in this Exhibit are for illustrative purposes, and that actual market demand will largely drive the actual excavation phasing.





Note that the acres, volumes, and years depicted in this Exhibit are for illustrative purposes, and that actual market demand will largely drive the actual excavation phasing.



**FIGURE 7**  
**DESIGNATION OF**  
**AREAS AND ACRES**  
**MAKAKILO QUARRY**

JUNE 5, 2008

Note that the acres, volumes, and years depicted in this Figure are for illustrative purposes, and that actual market demand will largely drive the actual excavation phasing.

## APPENDICES

Appendix A - Restoration Grading Plan Recommendations  
Agra Earth & Environmental (from July 1998 Engineering Report)

Appendix B - Grading Figures, Plans and Sections

Map of 100 Year Rainfall, Oahu, Hawaii	Figure 1
Existing Drainage	Figure 2
Developed Drainage	Figure 3
Overall Site Plan (Closure Grading Plan)	Figure 4
Closure Grading Plan with Index	Figure 5a
Cross Sections AA through II	Figures 5b1 - b9
Slope Ratio to Percentage	Figure 5c
Planting Slope Index	Figure 5d
Aerial Photo with Planting Slope Index	Figure 5e
Planting Slope Cross Sections AA through HH	Figure 5f
<u>Landform Profile - Castle Junction Landslide Mitigation</u>	<u>Figure 5g</u>
<u>Illustration of Final Grading - East Kapolei Reservoir</u>	<u>Figure 5h</u>
<u>Excavation and Landscape Phasing</u>	<u>Figure 6</u>
<u>Designation of Areas and Acreages</u>	<u>figure 7</u>

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Appendix C - Storm Drainage Calculations

C-1	Existing Runoff and Rainfall Storage Calculations
C-2	Developed Runoff and Rainfall Storage Calculations
C-3	Berm Surface Water Calculations
C-4	Storage-Elevation Tables

Appendix D - Not Used

Appendix E - Revised Mitigation/Revegetation Plan

Existing Vegetation	Exhibit 1
Location of View Planes	Exhibit 2-0
Viewplane Exhibits	Exhibits 2-1 - 2-9
Recommended Plant Palette	Exhibit 3
<u>Renaturalization</u> Matrix	<u>Exhibit 4</u>
<u>Renaturalization</u> Phasing	<u>Exhibit 5</u>

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Appendix F - Not Used

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