

9 JUSTIFICATION

9.1 Justification - Compliance with General Requirements for Conditional Use

Sections 21-2.90-2 (1) through (4) list the following criteria as general requirements for a condition use permit:

9.1.1 (1) Permitted Conditional Use in Zoning District

The proposed excavation area and buffer zone as well as the existing quarry are located in the AG-2 General Agricultural zoning district. Rock extraction falls under the land use category of "resource extraction," which is permitted as a conditional use (major) in the AG-2 zoning district.

The quarry site meets the minimum lot area, width, and depth requirements, as well as the minimum front, side and rear yard requirements. The heights of the structures in the quarry were discussed earlier in Section 5.8 Project Description – Existing and Proposed Building Heights.

9.1.2 (2) Suitable Site for Proposed Use

The rock is there. Prior to the opening of the existing quarry, test borings were conducted to determine the suitability of the area for high-grade basalt rock extraction. Recent test borings were also conducted to determine where further rock extraction could occur from the existing quarry. The test results showed that the area to the north has the same quality of material as the existing quarry and is highly promising for the continuation of operations in that direction. The area is owned by Grace Pacific and is currently in idle use.

The site is not suitable for agricultural use. The soils on the property constitute the overburden or surface layer of the site. Beneath the surface layer is the basalt rock which comprises the source of rock extraction for the quarry. According to the U.S. Natural Resources Conservation Service, soils on the property are predominantly Mahana-Badland complex (MBL), which consists of a combination of Mahana and Badland soils, and Stony Steep Land (rSY). The latter consists of masses of boulders and stones.⁴ Mahana soils are well drained and developed in volcanic ash. Badland soils are found on steep, nearly barren land, and are ordinarily not stony. The soil-forming material of Badland soils is generally soft or hard saprolite. Stones and boulders cover 50 to 90 percent of Stony Steep Lands. Rock outcrops occur in many places. This type of land is not suitable for agricultural use.

The size and shape of the site are suitable for the proposed use. The Proposed Use will occupy 34 of the 311 acres of Parcel 74. The remaining 277 acres will be used as a buffer zone for the duration of quarrying activities. The location of the site in the center of Parcel 74 and in the bowl of the Pu'u is well suited to buffering and screening from the surrounding parcels.

⁴ State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service. August 1972. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai*.

The location of the site is well suited for construction activity. There is much construction activity planned in the Kapolei/West Oahu area. The site is also within 30 minutes of Honolulu by the H-1 Freeway, and within 1 hour from any point on Oahu. These are critical factors for the delivery of hot-mix asphalt and ready-mix concrete.

The location of the site is suitable for drainage. There is no impact on drainage as the former pit will be used as a drainage retention basin.

The location of the site is suitable for visual mitigation. The Pu'u ridges and cone provide a natural visual barrier for much of Makakilo.

The location of the site is well suited for access. There are no additional requirements for infrastructure. The planned North South Road interchange with the H-1 Freeway will provide direct freeway access in all four directions, and remove traffic from Farrington Highway.

9.1.3 (3) No Adverse Impact on Surrounding Uses

The proposed excavation area and buffer zone (Parcel 74) are currently in idle use. Parcel 74 abuts grazing activity on AG-1 zoned land to the NE; to the NW, residential use with the R-5 zoned development by Castle & Cooke and the A-1 zoned Anuhea at Makakilo development; to the SW, undeveloped land with AG-2 and R-5 zoning; and to the SE, Parcel 82. The residential uses are buffered from the proposed excavation area by the upper elevations of Pu'u Makakilo. See Figure 11 for a cross section view of the relationship of the quarry and the mauka residential area.

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

The proposed use will not alter the character of the surrounding areas described above, in a manner substantially limiting, impairing, or precluding the use of such surrounding properties for the principal uses permitted in the underlying zoning district.

9.1.4 (4) Beneficial Effect of Proposed Use

The Proposed Use readily complies with the requirements for conditional uses: 1) it is a permitted use in the zoning district and conforms to LUO requirements; 2) it is a suitable site; 3) it does not alter the character of surrounding area to impair permitted uses; and 4) it meets the development standards of LUO Articles 3 and 5.

The most significant and compelling argument justifying the Proposed Use is its unique and critical contribution to the general welfare of the residents of Oahu.

Oahu is running out of construction grade rock.

Permitted quarry reserves are a finite and wasting resource.

No Oahu reserves have been permitted in over twenty years.

The three quarries on Oahu – Grace's at Makakilo, Hawaiian Cement's at Halawa, and Ameron's at Kapaa – were last permitted in 1973, 1974, and 1985, respectively. A request by Ameron to open a regional quarry at Kaukonahua, Waialua in 1993 was withdrawn because of public opposition.

Today it has become nearly impossible to find a new source of basaltic rock on Oahu that: - is of a quality suitable for ready mix concrete (portland cement concrete) or hot-mix asphalt (asphaltic concrete), known in the industry as A-Grade aggregate, or suitable for structural fill (B-Grade aggregate); - is in a deposit physically accessible and able to be permitted; and - is in a quantity sufficient to justify the capital investment.

Recycling of concrete rubble and asphalt pavements is part of the solution. Grace Pacific opened the first permitted concrete rubble and asphalt pavement recycling operation on Oahu in 2002 under Zoning Variance 2002/VAR-51 and Solid Waste permit RY-0049-02 (see Exhibits D and E). While the aggregate in rubble and pavements is of an A-Grade nature, less than 20% is able to be re-used in an A-Grade application, with the balance filling demand for B-Grade products.

Oahu's 2005 construction demand was for approximately 900,000 cubic yards of ready-mix concrete and 650,000 tons of hot-mix asphalt. Ready-mix concrete uses a blend of A-Grade basaltic aggregate, basaltic manufactured sand and Maui dune sand. Hot-mix asphalt uses A-Grade basalt. The A-Grade aggregate and sand component of 2005 construction demand is estimated at 2.3 million tons. Oahu's quarries produced an estimated 1.9 million tons of A-Grade aggregate and manufactured sand. The shortfall was made-up from off-island.

Oahu's quarry operators have begun to import rock. In 2005 and 2006, 400,000 tons and 330,000 tons respectively, of A-Grade aggregate and dune sand were shipped from Kahului, Maui to Pier 19 on Oahu by Ameron and Hawaiian Cement. The drop in 2006 volume reflects a decrease in the amount of available dune sand. In 2006, Grace Pacific, on a trial basis, imported 56,000 tons of granite aggregate from Canada. Also in 2006, 9,000 tons and 22,000 tons of Canadian concrete sand were purchased by Ameron and Hawaiian Cement respectively. Today, Pier 19 is no longer available and Ameron is investing in channel dredging and improvements to Pier 60 to be able to ship dune sand and basaltic rock from Maui.

The additional costs of ocean freight and handling, the increasing congestion at Hawaii's harbors, and the risk of reliance on long distance shipping makes imported aggregate a second choice to locally quarried aggregate.

Permitted reserves at Grace's Makakilo Quarry are estimated at less than 1 year of A-Grade and 11 years of B-Grade at the current level of demand. The approval of Grace's Proposed Use would enable Grace to supply 550,000 tons of A-Grade and 600,000 tons of B-Grade annually to Oahu's construction market for the next 25 years.

In recent years, the State Legislature has committed considerable time and resources to the development and implementation of the Hawaii 2050 Sustainability Plan. Currently, the draft plan is intended to be submitted by the Hawaii 2050 Sustainability Task Force to the legislature in 2008 for review and discussion.

Construction grade rock is one of Oahu's most valuable natural resources. Planning for a sustainable future must include the recognition that quarries are vital to the economic vitality of the state. To that end, the proposed quarry extension is consistent with the State's need to promote self-sustainability in Hawai'i.

9.2 Justification - Compliance with Conditional Use and Zoning Development Standards

9.2.1 Compliance with Conditional Use Standards of LUO Article 5

The specific development standards of LUO Article 5 relevant to this proposal are Sections 21-5.380 Joint Development and 21-5.520 Resource Extraction.

Section 21-5.380 requires that a joint development agreement be submitted by the owners of Parcels 74 and 82, binding the owners and their successors to maintain the proposed development in conformity with applicable zoning regulations. This agreement, upon approval of the corporation counsel of the City, shall be filed as a covenant running with the land with the registrar of the Land Court. At present, the resource extraction activities conducted on Parcel 82 are subject to a Declaration of Conditions filed as Land Court Order #153196, dated October 7, 2003, on file with the Land Court (see Exhibit P). A draft of the joint development agreement for the activities contemplated by this proposal is attached to this application as Exhibit Q.

Section 21-5.520(a) requires that blasting operations be restricted to Mondays through Friday between 8 a.m. and 5 p.m. The present operations on Parcel 82 comply with this requirement, as will the proposed operations on Parcel 74.

Section 21-5.520(b) requires that plans showing the exploitation and reuse phases of the affected parcels be submitted with the application. Plans for the exploitation and reuse phases of the present operations on Parcel 82 are contained in the Engineering Report dated March 2004 on file with the City. The Engineering Report has been updated to reflect the activities contemplated by this proposal and is attached to this application as Exhibit K.

9.2.2 Compliance with District Development Standards of LUO Article 3

The district development standards of LUO Article 3 relevant to this proposal are identified in Section 21-3.50-4.

Section 21-3.50-4 refers to Table 21-3 to identify permitted uses and structures, and to Table 21-3.1 to identify development standards.

Under Table 21-3, resource extraction in zoning district AG-2 is allowed as a conditional use (major) and subject to the standards of Article 5.

The development standards of Table 21-3.1 are not relevant to this proposal, as no buildings or structures are contemplated on Parcel 74.

10 LAND USE COMMISSION GUIDELINES

The State Land Use Commission guidelines for granting a Special Use Permit are found in HAR Title 15, Subtitle 3, Chapter 15, Section 15-15-95(b):

Requirement - Such (proposed) use shall not be contrary to the objectives sought to be accomplished by the State Land Use Law and Regulations

The relevant State Land Use Law and Regulations are described in HAR Section 15-15-95(b)(1) : "Such use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205a, HRS, and the rules of the Commission."

Objectives Sought to be Accomplished by Chapters 205 and 205a

The objectives sought to be accomplished by chapter 205, HRS, relevant to this application are described in the following sections:

Section 205-(2)(a)(3) Districing and Classification of Lands: "In the establishment of the boundaries of agricultural districts the greatest possible protection shall be given to those lands with a high capacity for intensive cultivation."

Section 205-4.5(c) Permissible Uses Within the Agricultural Districts: "Within the agricultural district, all lands with soil classified by the land study bureau's detailed land classification as overall (master) productivity rating class C, D, E, or U shall be restricted to the uses permitted for agricultural districts as set forth in section 205-5(b)."

Section 205-5(b) Zoning: "... Other uses may be allowed by special permits issued pursuant to this chapter."

Section 205-6(a) Special Permit: "Subject to this section, the county planning commission may permit certain unusual and reasonable uses within agricultural... districts other than those for which the district is classified."

Section 205-6(d) Special Permit: Special permits for land the area of which is greater than fifteen acres... shall be subject to approval by the land use commission."

The objectives sought to be accomplished by chapter 205A, HRS, are discussed in section 10.6

10.1 Proposed Use Is Not Contrary To Land Use Law Objectives

The parcels which 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 soils in these parcels are classified as "E" by the Land Study Board (LSB). Thus the Proposed Use is not contrary to the objective of Section 205-(2)(a)(3) whereby the greatest possible protection shall be given to those lands with a high capacity for intensive cultivation.

With a LSB classification of "E," Section 205-4.5(c) directs us to examine the uses permitted for agricultural districts as set forth in Section 205-5(b). While the

Proposed Use does not fall under those uses enumerated in Section 205-5(b), Section 205-5(b) does allow for other uses through the issuance of a county special permit (Section 205-6). Under Section 205-6(a), the county planning commission may permit certain unusual and reasonable uses within agricultural districts other than those uses for which the district is classified, with the further qualification that Special Permits for land areas greater than fifteen acres shall require the approval of the State Land Use Commission (Section 205-6(d)). Under Article 3 of Chapter 21 of the Revised Ordinances of Honolulu, the Proposed Use under this application is allowed under a Conditional Use Permit (major) for Resource Extraction in the AG-2 Zoning District. Thus, the Proposed Use under this application is not contrary to the objectives of Sections 205- 4.5(c), 5(b), and 6(a) and 6(d).

10.2 Proposed Use Will Not Adversely Affect Surrounding Properties.

Descriptions of the potential impacts and mitigative measures arising from the Proposed Use on the surrounding properties were provided in previous sections of this application.

Section 4.3 Site Description - Abutting Uses and Photo F-1 identifies the current uses of the adjoining properties.

Section 5.9 Project Description - Setbacks and Buffering, Photo F-3 and Figure 11 describe the buffering of the Proposed Use from the surrounding properties.

Section 7.4.1 Neighborhood Board - Visual Impact, Section 8.3 Other Impacts - Physical Environment - Public Views, and the April 2007 update to the Engineering Report (Exhibit K), describe the mitigative measures to be taken to minimize the visual impact of the Proposed Use on surrounding properties.

Section 8.3.3 Other Impacts - Physical Environment - Flood Hazard and Section 3 of Exhibit K address the impact of the Proposed Use on drainage and surrounding properties.

Section 8.6 Other Impacts - Noise, Lights, Dust, Odor, and Vibrations describes the impact of operations associated with the Proposed Use on surrounding properties.

Summarizing, air quality and noise impacts are expected to occur, but will be controlled within the active area of the quarry and further mitigated by a broad open space buffer that encircles the quarry grounds. Additionally, the quarry operation will continue to be in compliance with existing air quality standards as administered by the State DOH and with Chapter 43, HAR, Community Noise Control Regulations as administered by the same State agency.

Stormwater runoff from the active quarry will remain within the quarry grounds and not discharge to makai areas below the H-1 Freeway. Through best management practices, erosion and sedimentation will be controlled within the boundaries of the quarry.

The proposed expansion area will extend the boundaries of the existing active quarry and result in increased visibility of the facility. Existing view analyses have shown

that the visual impact of the current quarry is not significant. Adjacent or nearby views are predominantly shielded by existing berms and intervening terrain. Distant views are obscured by the long views and overall landscape. Only the back wall of the quarry would be visible from the Ewa plains, but its natural colors blend easily with the surrounding lands. A closure plan for the quarry will result in the re-naturalization of the active area in sections as the quarry closes in phases.

10.3 Proposed Use Will Not Unreasonably Burden Public Agencies

Description of the present levels of service by public agencies with respect to roads and streets, sewers, water, drainage and school improvements, and police and fire protection were provided in Sections 6.1, 6.2, and 6.3 Infrastructure, and 8.1 Other Impacts of this application.

None of the sections identified any additional or new requirements of or from public agencies arising from the Proposed Use.

10.4 Unusual Conditions Have Arisen Since District Boundaries Were Established

In approving the existing Special Use Permit in 1973, the Land Use Commission recognized the uniqueness of a quarry operation and the need for such an operation to sustain the maintenance and growth of Oahu's infrastructure and general welfare of its citizens. Today, the need is even more acute. Section 9.1.4 Beneficial Effect of Proposed Use describes the current level of and future alternatives for quarry operations on Oahu.

10.5 Unsuitable Site Conditions for Designated State Land Use

The proposed quarry site has steep terrain, rocky soils, and a dry environment. These conditions are harsh and not suitable for agricultural uses. Various soil studies concur that the soil is inappropriate for intensive agricultural use.

According to the U.S. Natural Resources Conservation Service, soils on the property are predominantly Mahana-Badland complex (MBL), which consists of a combination of Mahana and Badland soils. Mahana soils are well drained and developed in volcanic ash. Badland soils are found on steep, nearly barren land, and are ordinarily not stony. The soil-forming material of Badland soils is generally soft or hard saprolite.

The proposed quarry area also contains Stony Steep Lands (rSY), which consist of masses of stones and boulders.⁵ These rock materials cover 50- to 90-percent of the area and include rock outcrops in many places. Stony Steep Lands are not suitable for agricultural use.

The Agricultural Lands of Importance to the State of Hawaii (ALISH) maps, prepared by the State Department of Agriculture, show no designation of "Prime,"

⁵ State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service. August 1972. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lana.*

“Unique,” or “Other” important agricultural lands within the proposed quarry expansion area.

As described earlier, the LSB’s Agricultural Productivity Rating for the expansion area is “E.” On a scale of A to E, the Bureau assessed and assigned the lowest rating for the property in terms of overall potential for agricultural productivity.

10.6 Consistency with Chapter 205A, HRS

Hawaii Coastal Zone Management Program

Special use Permit (SUP) Application No 2007/SUP-5

Conditional Use Permit (CUP) Application No. 2007/CUP-49

Makakilo Quarry, Oahu, Hawaii

The Proposed project is consistent with the following relevant objectives and policies of Chapter 205A, HRS, Coastal Zone Management.

Recreational Resources

Objective:

Provide coastal recreational opportunities accessible to the public.

Policy:

- A) *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area...*

Discussion:

The project site 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.

Historic Resources

Objective:

Protect, 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.

Policies:

- A) *Identify and analyze significant archaeological resources.*
- B) *Maximize information retention through preservation of remains and artifacts or salvage operations.*
- C) *Support the state goals for protection, restoration, interpretation, and display of historic resources.*

Discussion:

An archaeological survey was conducted in the project area by an archaeology consultant. The survey included literature research and field inspection. Results from the

survey indicated that no archaeological sites were identified in the project area. If a site is uncovered during operations of the proposed project, work in the immediate area of the find will be halted and the Historic Preservation Division of the State of Hawaii will be immediately contacted for appropriate follow-up action.

Scenic and Open Space Resources

Objective:

Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

- 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) *Encourage those developments which are not coastal dependent to locate in inland areas.*

Discussion:

The proposed project is not located on the shoreline and is not coastal dependent. It will involve earthwork that would alter the existing terrain below Puu Makakilo, but measures will be taken to camouflage or soften the appearance of the alterations by providing landscape berms and renaturalization treatments. Visual models have been developed for the quarry's progressive stages and final configuration and have been used as an aid in preparing mitigation plans for the project's visual impact.

Coastal Ecosystems

Objective:

Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

- A) *Improve the technical basis for natural resource management.*
- B) *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance.*
- C) *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.*
- D) *Promote water quantity and quality planning and management practice which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.*

Discussion:

The proposed project is located inland more than three miles from the shoreline. It will not adversely affect nor disrupt Oahu'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 complies with existing State water quality standards.

Economic Uses

Objective:

Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

- 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.*

Discussion:

The proposed project is not located on the shoreline nor is a coastal dependent development. It will not interfere with coastal dependent facilities and their related activities.

Coastal Hazards

Objective:

Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies:

- A) *Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.*
- B) *Ensure that developments comply with requirements of the Federal Flood Insurance Program.*

Discussion:

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.

Managing Development

Objective:

Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policy:

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

Discussion:

The above objective and policy are directed at government agencies. The project's application process will include a public hearing during the conditional Use Permit and Special Use Permit review. At the time of the applications' hearing, public participation will be encouraged, project information and community input will be exchanged, and coastal zone management awareness will be promoted.

Public Participation

Objective:

Simulate public awareness, education, and participation in coastal management.

Policies:

- A) *Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program.*
- 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 related issues, developments, and government activities.*
- C) *Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

Discussion:

The above objective and policy are directed at government agencies. The applicant concurs with the objective and policies of "Public Participation" and will implement and maintain its project to be consistent with them.

Beach Protection

Objective:

Protect beaches for public use and recreation.

Policies:

- A) *Locate new structures inland from the shoreline setback to conserve open space and to 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.

Discussion:

The proposed project 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.

Marine Resources

Objective:

Implement the State's ocean resources management plan.

Policies:

- A) *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources.*
- B) *Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial.*

Discussion:

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.

11 FIGURES

- Figure 1 Location Map
- Figure 2 Existing Quarry and Processing Site
- Figure 3 Parcel Map
- Figure 4 Existing Uses
- Figure 5 Proposed Use
- Figure 6 Exhibit A to PCR Declaration of Conditions Filed with Land Court in Accordance with Condition 12 of City Council Resolution 95
- Figure 7 Attachment to City Council Resolution 95
- Figure 8 Topographic map Parcels 74, 82 and 4
- Figure 9 Existing Structures and Parking in Quarry Site
- Figure 10 Existing Structures and Parking in Processing Site
- Figure 11 Section A-A' of Existing Quarry and Proposed Relocation of Designated Excavation Area
- Figure 12 Proposed Grading
- Figure 13 Active Quarry, October 2005 through September 2006
- Figure 14 Settling Basin as Depicted in 1973 Application, Exhibit XIX
- Figure 15 Comparison of 1973 Exhibit A to PC&R Declaration with 2004 Revised Final Grading Plan as Accepted by DPP
- Figure 16 July 1998 Parametrix Revised Grading Plan

12 PHOTOS

F-1 Uses on Adjoining Properties

F-2 Street Access

F-3 Existing Structures and Parking in Quarry Site

F-4 Existing Structures and Parking in Processing Site

F-5 Structures, Temporary Facilities, and Equipment in Excavation Area

F-6 Buildings, Temporary Facilities, and Equipment in Processing Site

F-7 Renaturalization of Abandoned Golf Development Project

F-8 Overlay of 2004 Revised Grading Plan to September 2006 Aerial Photo



Photograph F-1 USES ON ADJOINING PROPERTIES

Ewa, Oahu, Hawaii



0 300 600 1200
SCALE IN FEET

Photograph F-2 STREET ACCESS

Ewa, Oahu, Hawaii

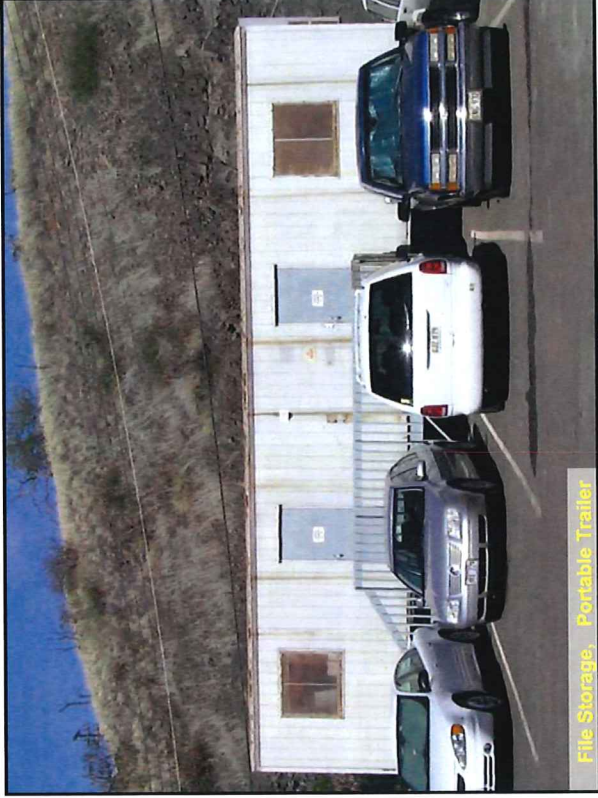


Photograph F-3
EXISTING STRUCTURES AND PARKING
IN QUARRY SITE



Photograph F-4
EXISTING STRUCTURES AND PARKING
IN PROCESSING SITE

**F-5 Structures, Temporary Facilities, and
Equipment in Excavation Area**



File Storage, Portable Trailer



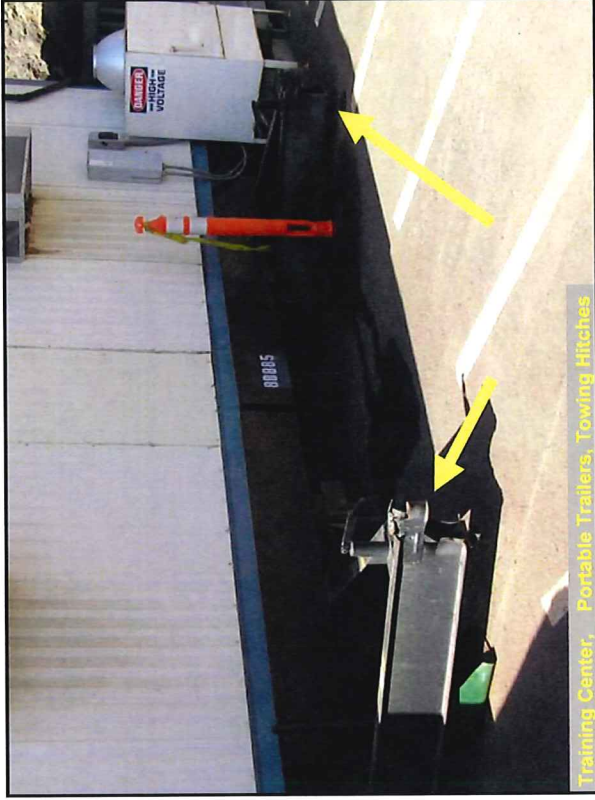
Training Center, Portable Trailers



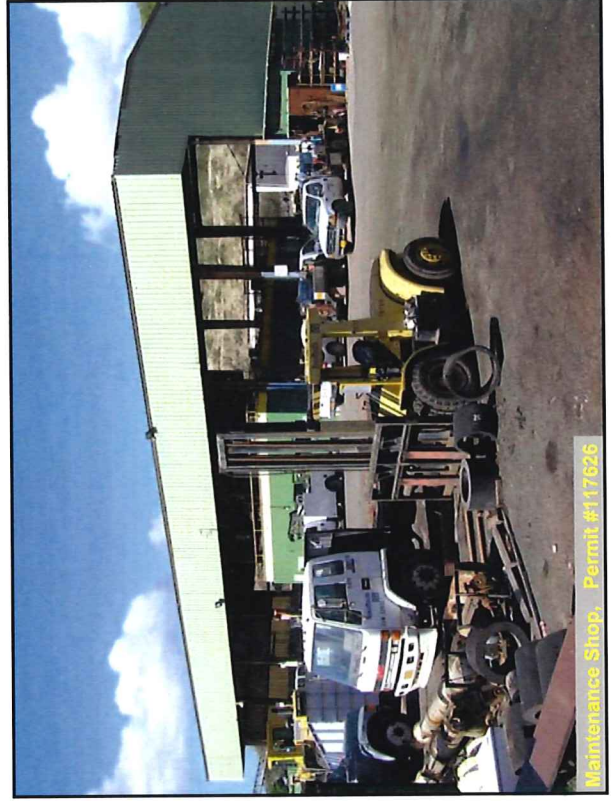
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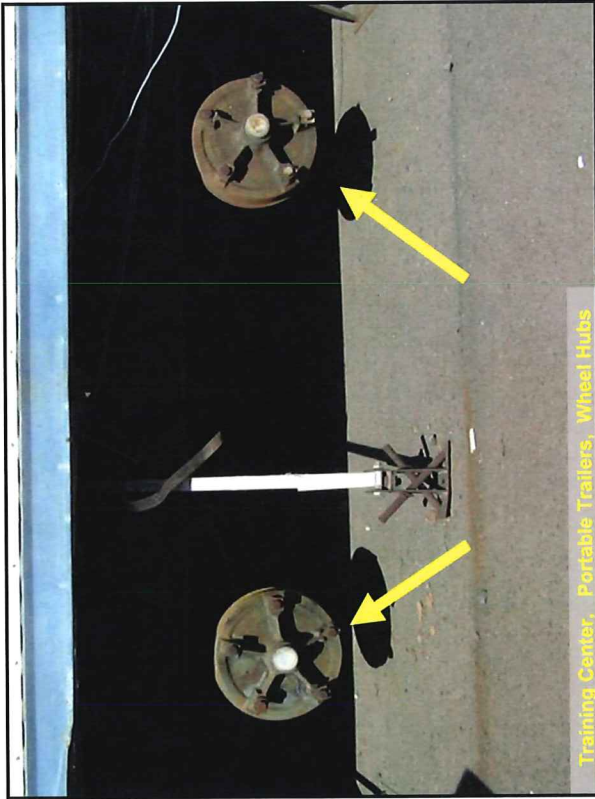
File Storage, Portable Trailer, Towing Hitch



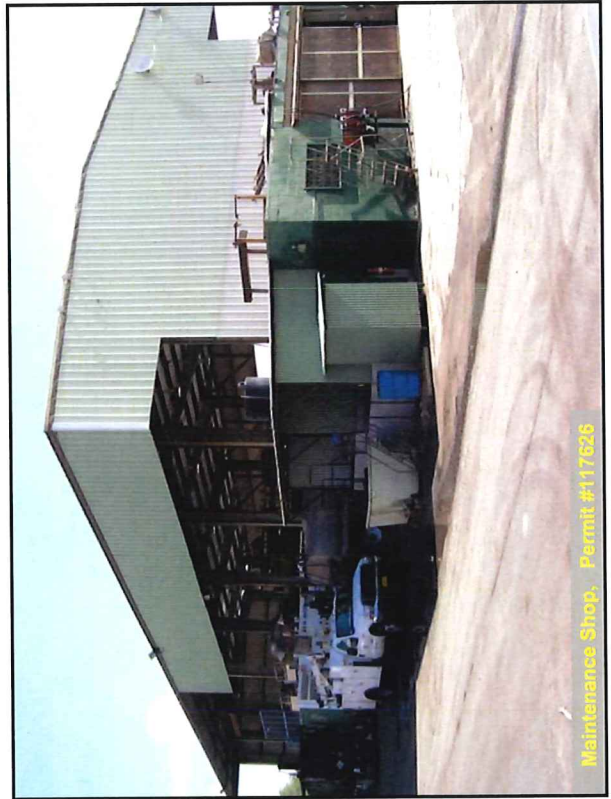
Training Center, Portable Trailers, Towing Hitches



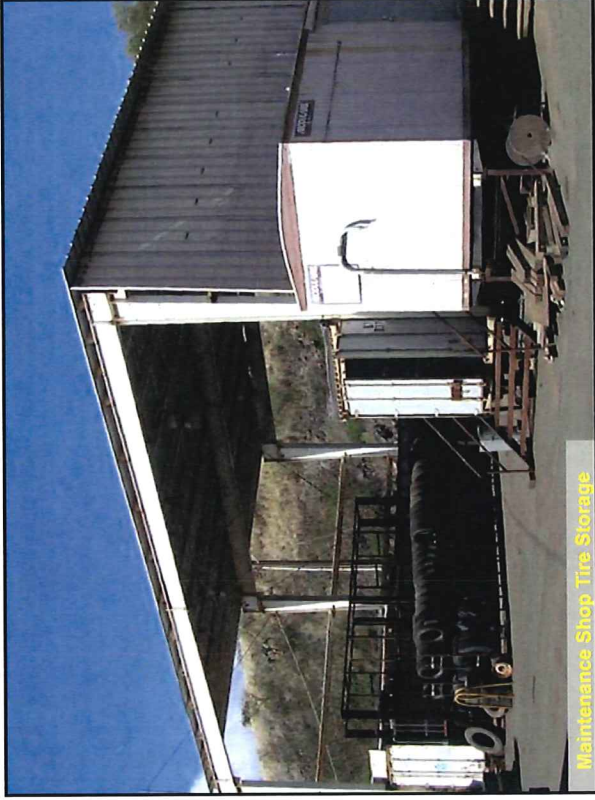
Maintenance Shop, Permit #17626



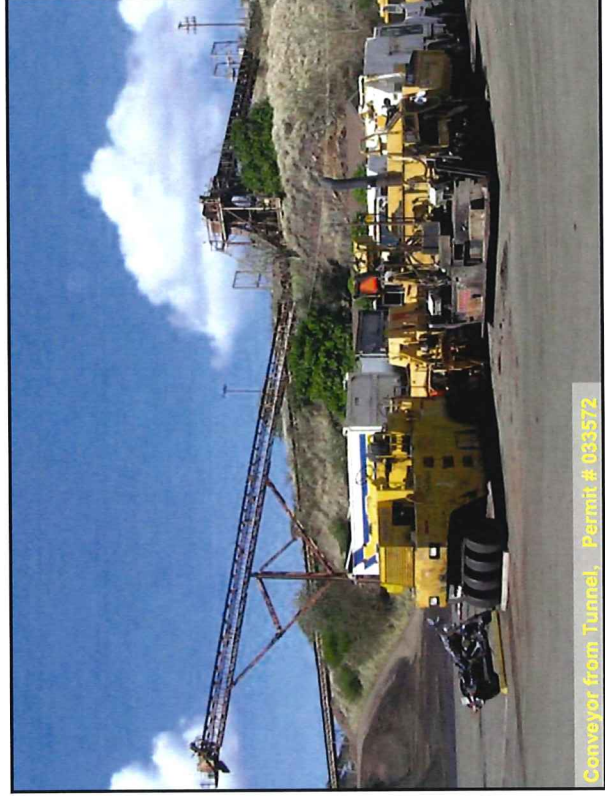
Training Center, Portable Trailers, Wheel Hubs



Maintenance Shop, Permit #17626



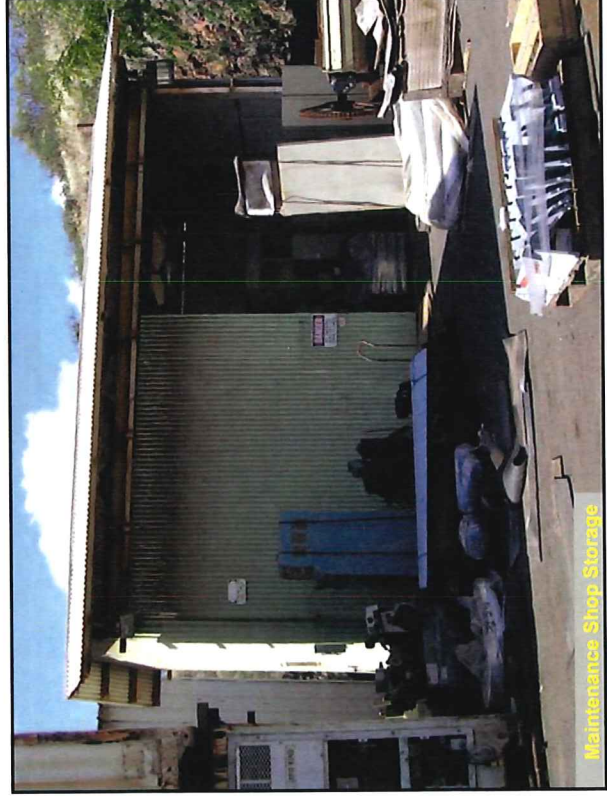
Maintenance Shop, Tire Storage



Conveyor from Tunnel, Permit # 033572



Maintenance Shop Storage, Shipping Containers



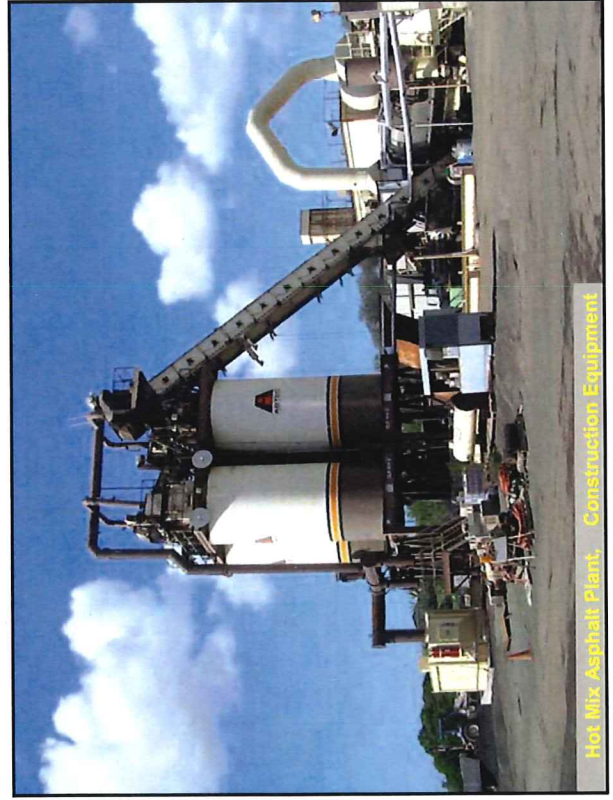
Maintenance Shop Storage



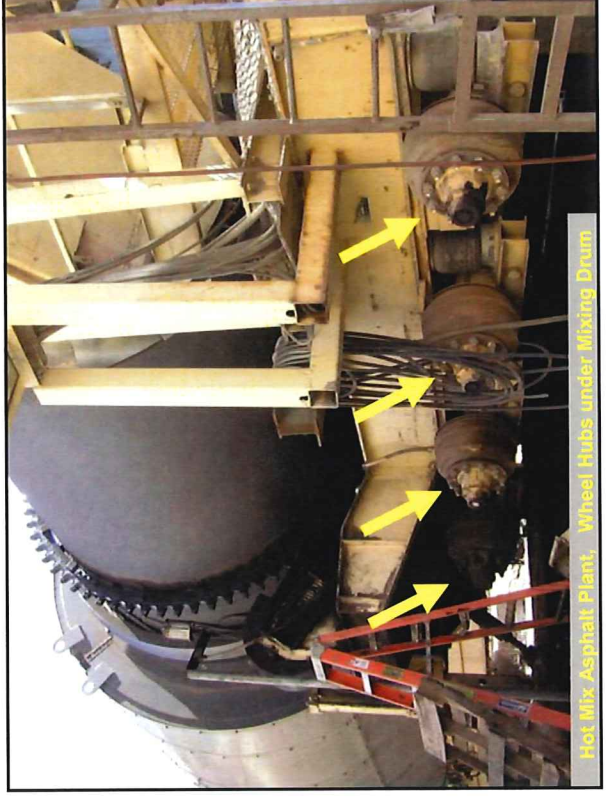
Finish Screening Plant, Permit # 032572



Ready Mix Batch Plant, PC&R Permit



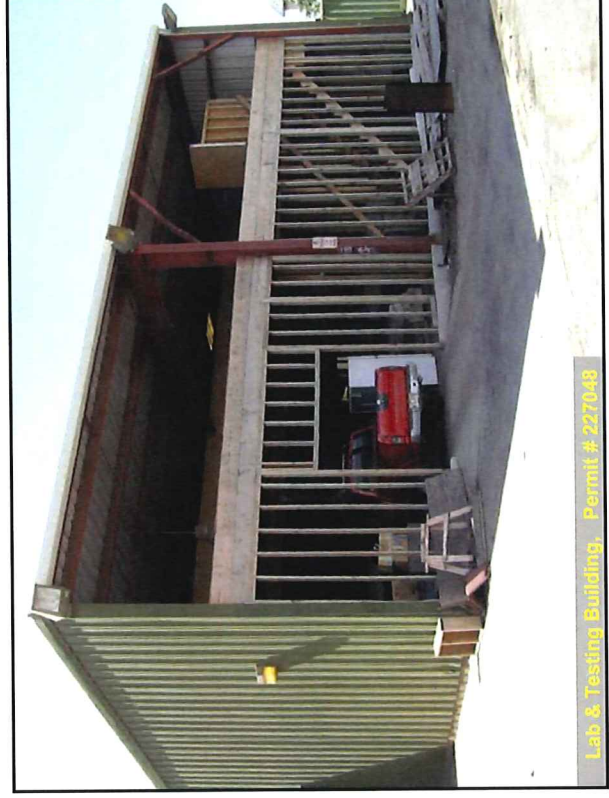
Hot Mix Asphalt Plant, Construction Equipment



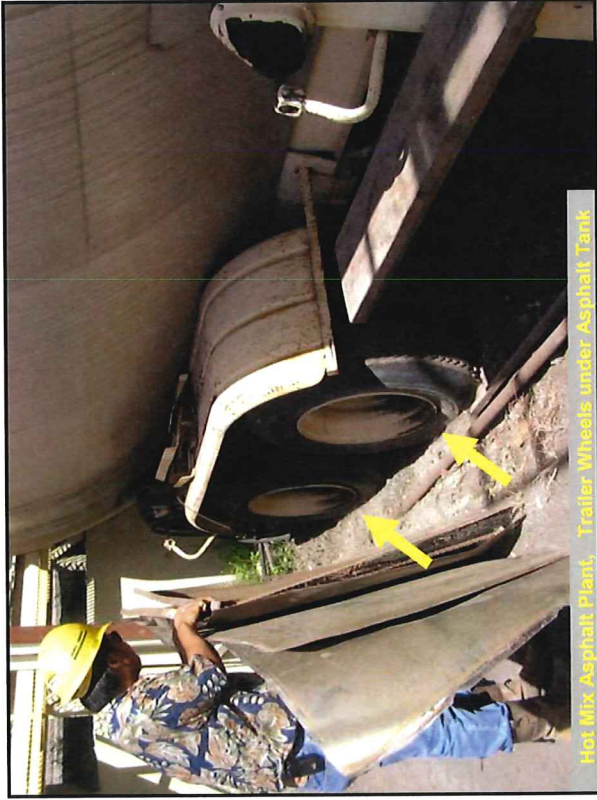
Hot Mix Asphalt Plant, Wheel Hubs under Mixing Drum



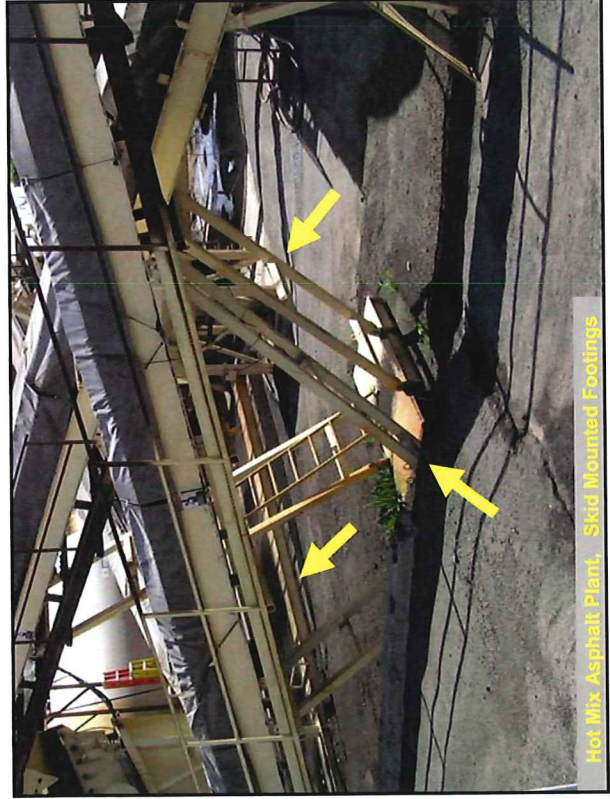
Hot Mix Asphalt Plant, Skid Mounted Footings



Lab & Testing Building, Permit # 227048



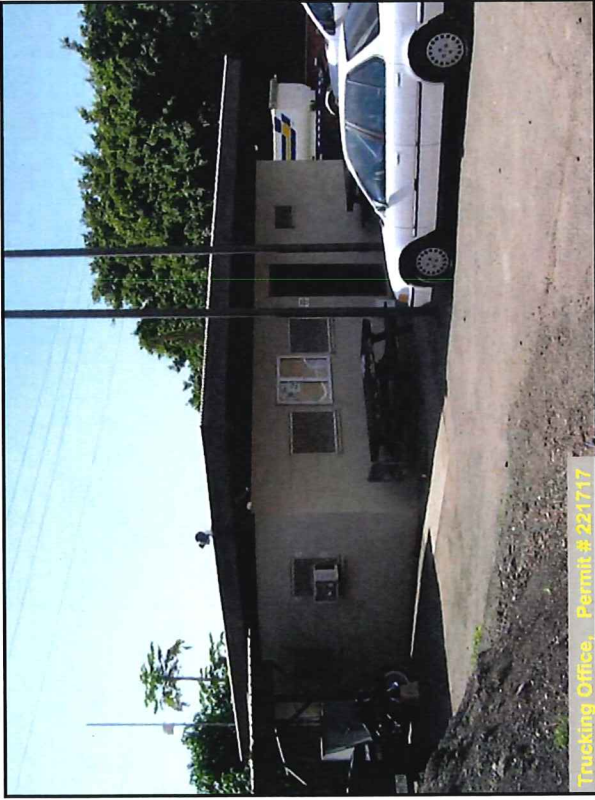
Hot Mix Asphalt Plant, Trailer Wheels under Asphalt Tank



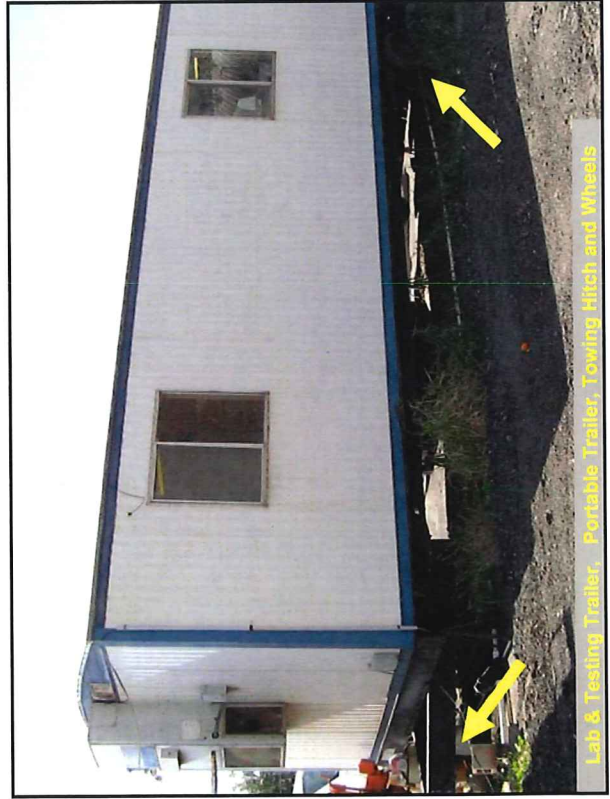
Hot Mix Asphalt Plant, Skid Mounted Footings



Truck Scale and Scale House, PC&8 Permit

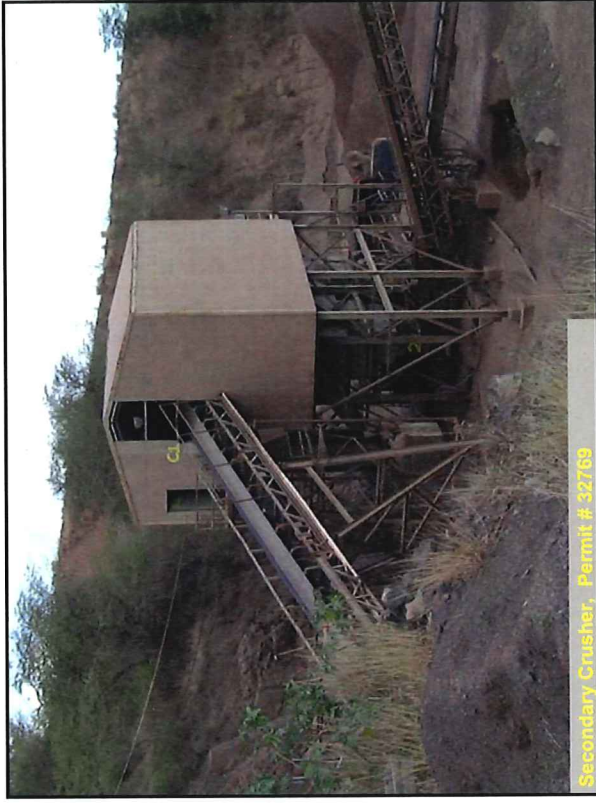


Trucking Office, Permit # 221717



Lab & Testing Trailer, Portable Trailer, Towing Hitch and Wheels

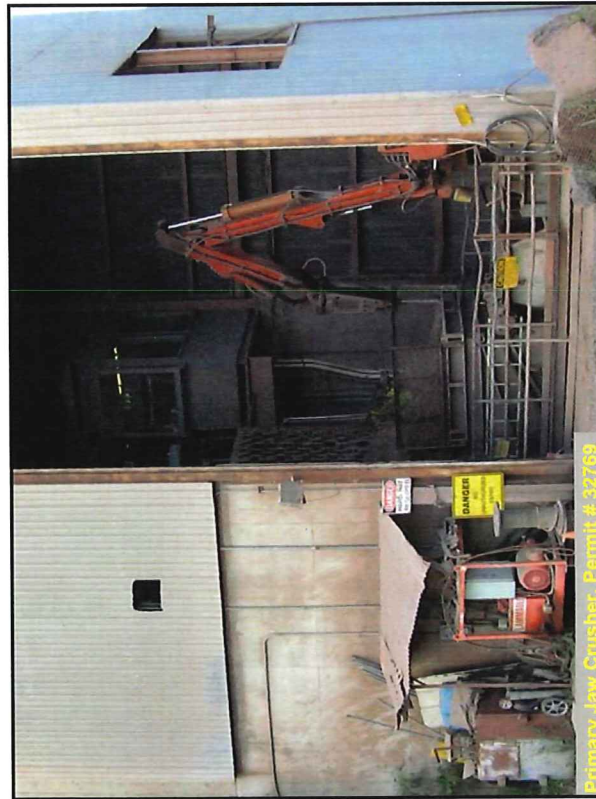
**F-6 Building, Temporary Facilities, and
Equipment in Processing Site**



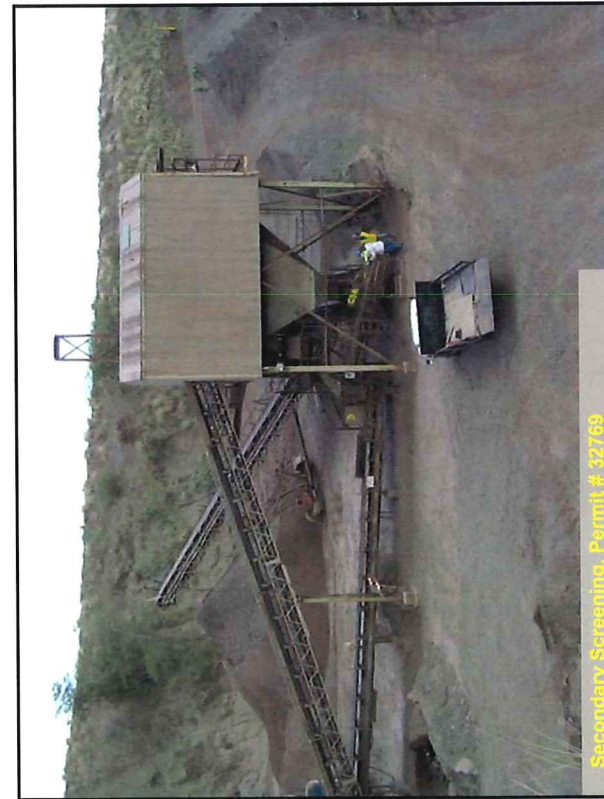
Secondary Crusher, Permit # 32769



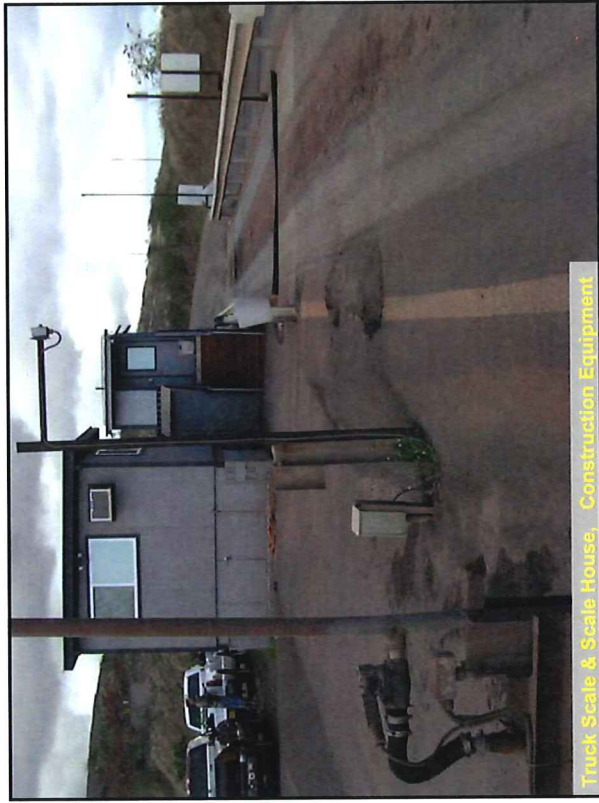
Recycle Crushing & Screening Plant, Construction Equipment



Primary Jaw Crusher, Permit # 32769



Secondary Screening, Permit # 32769



Truck Scale & Scale House, Construction Equipment



Employee Lounge, Portable Trailer, Towing Wheels



Scale House, Construction Equipment, Towing Hitch



1998



2006

Figure F-7
RENATURALIZATION OF ABANDONED
GOLF DEVELOPMENT PROJECT

Ewa, Oahu, Hawaii



LEGEND

112.4 ACRES, PARCEL B2 LICENSE AREA
W/JAMES CAMPBELL COMPANY

94.1 ACRES, 2004 GRADING PLAN

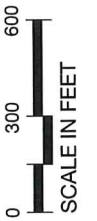


Figure F-8
OVERLAY OF 2004 REVISED GRADING PLAN ONTO
SEPTEMBER 2006 AERIAL PHOTO

Ewa, Oahu, Hawaii

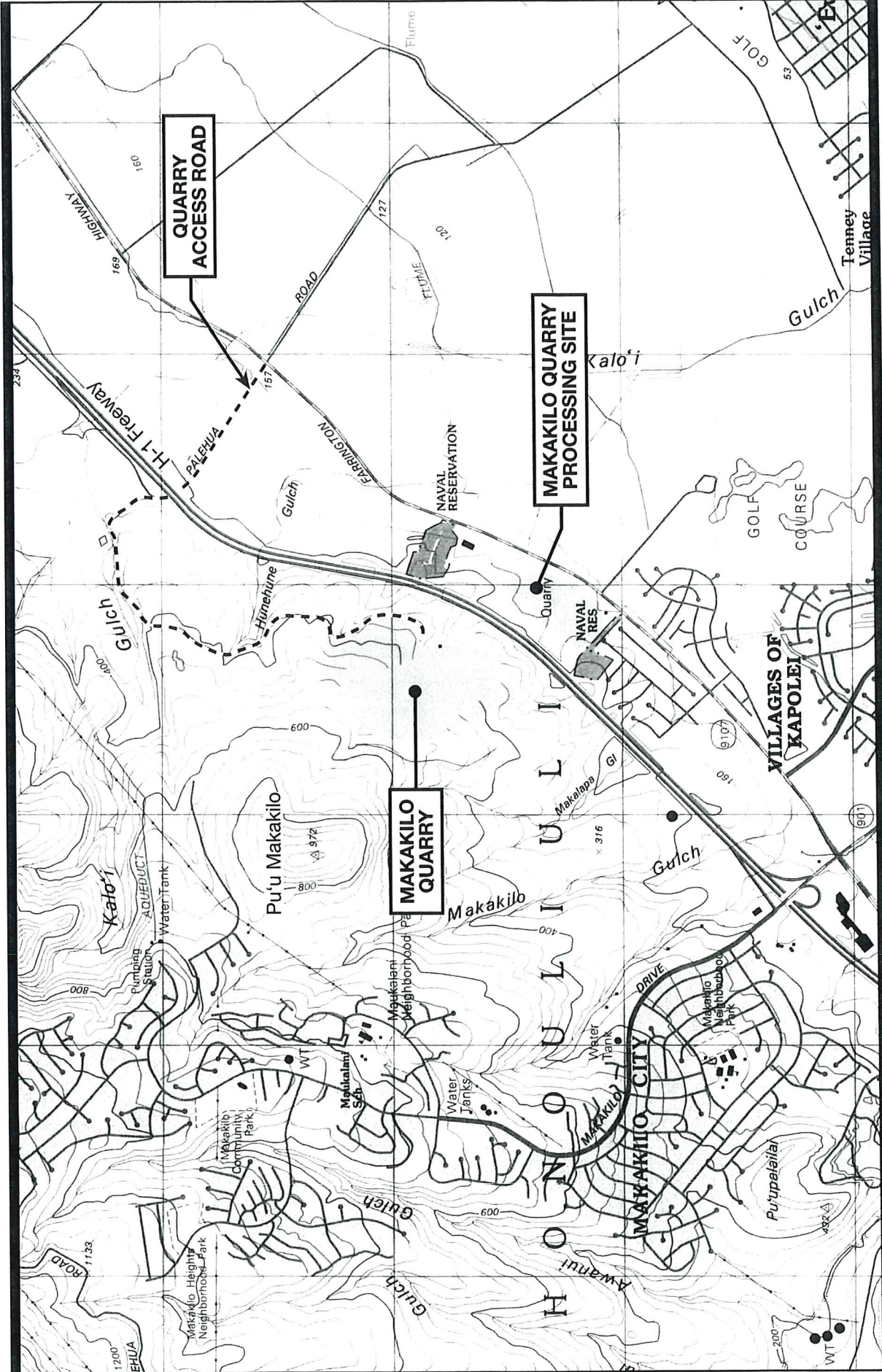


Figure 1
LOCATION MAP

Ewa, Oahu, Hawaii

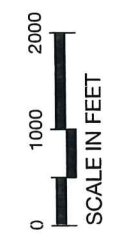




Figure 2
EXISTING QUARRY AND PROCESSING SITE

Ewa, Oahu, Hawaii

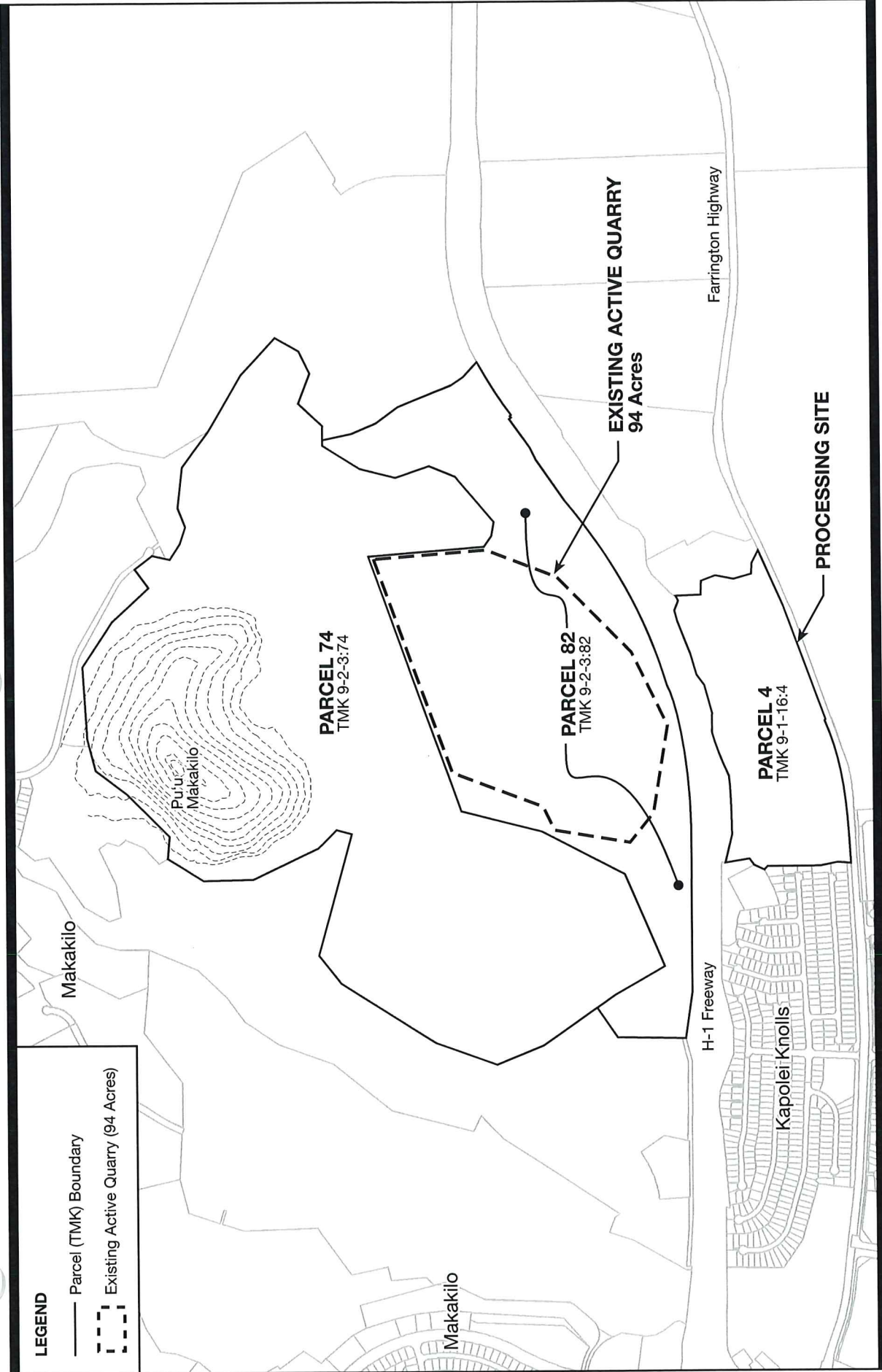


Figure 3
PARCEL MAP
 Ewa, Oahu, Hawaii

BentCollins
 NORTH
 0 300 600 1200
 SCALE IN FEET

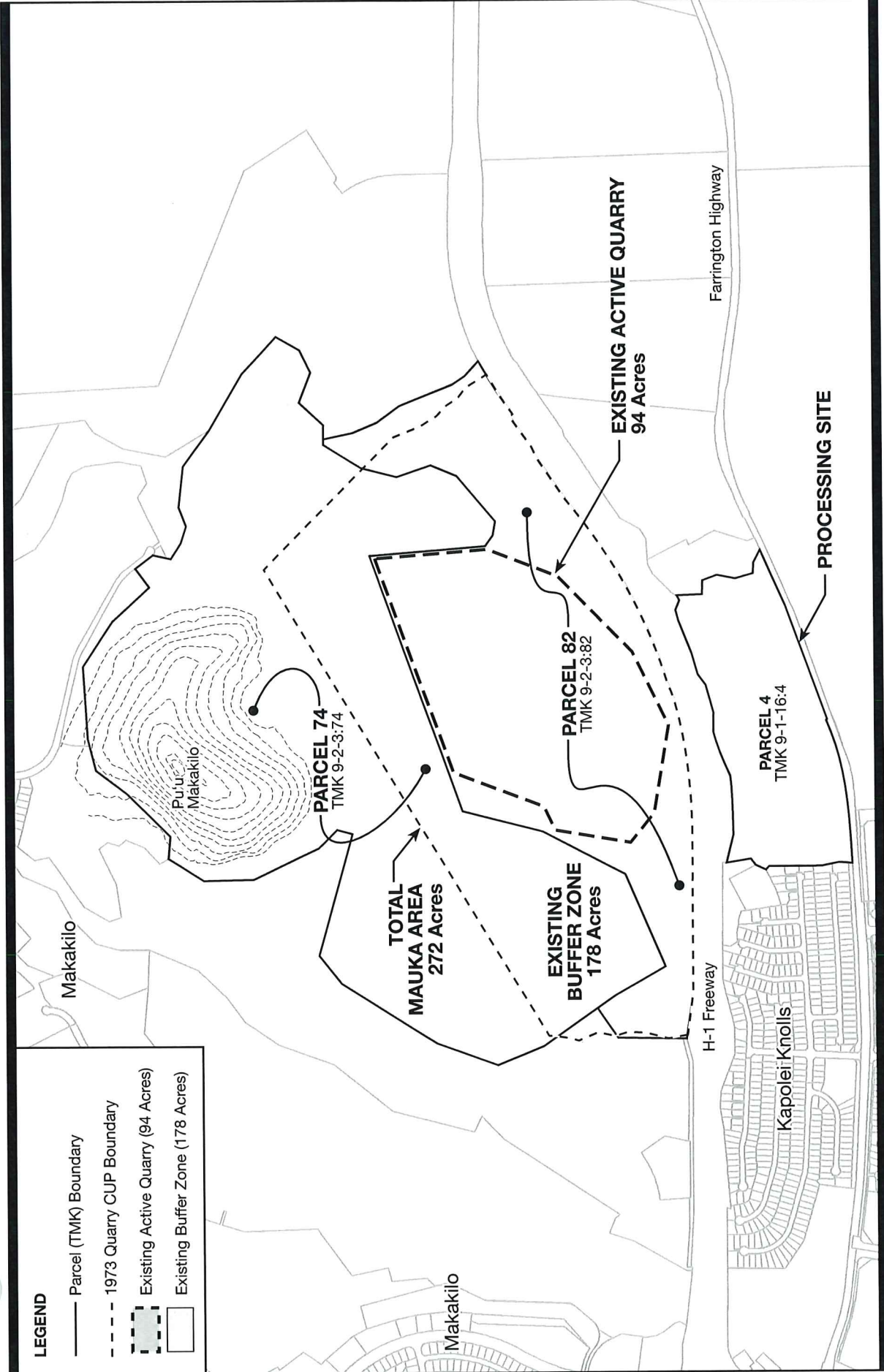
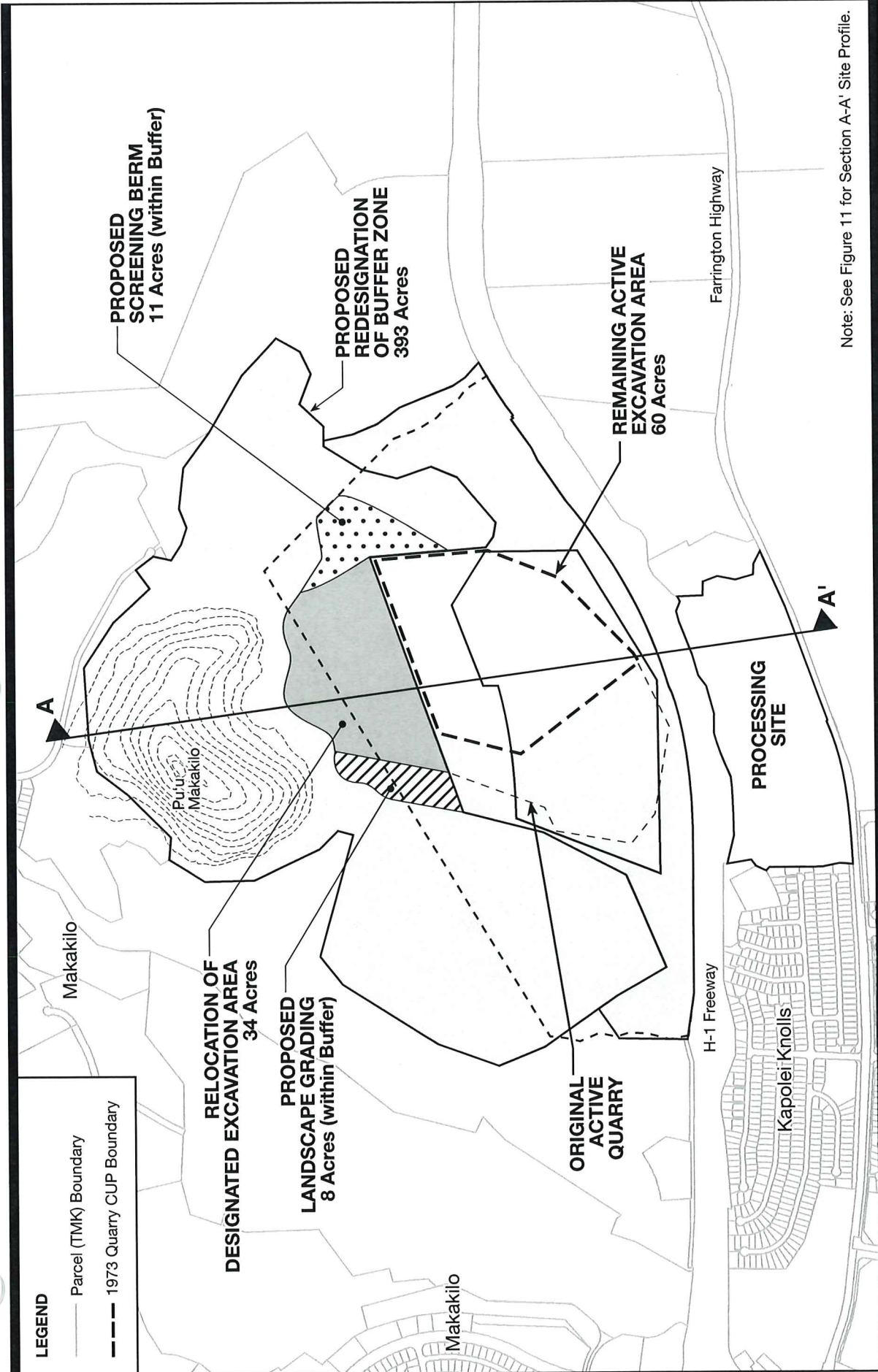


Figure 4
EXISTING USES

Ewa, Oahu, Hawaii



Note: See Figure 11 for Section A-A' Site Profile.

Figure 5
PROPOSED USE

Ewa, Oahu, Hawaii

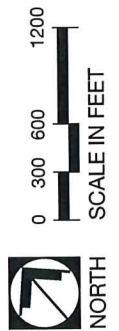


Figure 6
EXHIBIT A TO PCR DECLARATION OF
CONDITIONS FILED WITH LAND COURT
IN ACCORDANCE WITH CONDITION 12
OF CITY COUNCIL RESOLUTION 95

Ewa, Oahu, Hawaii

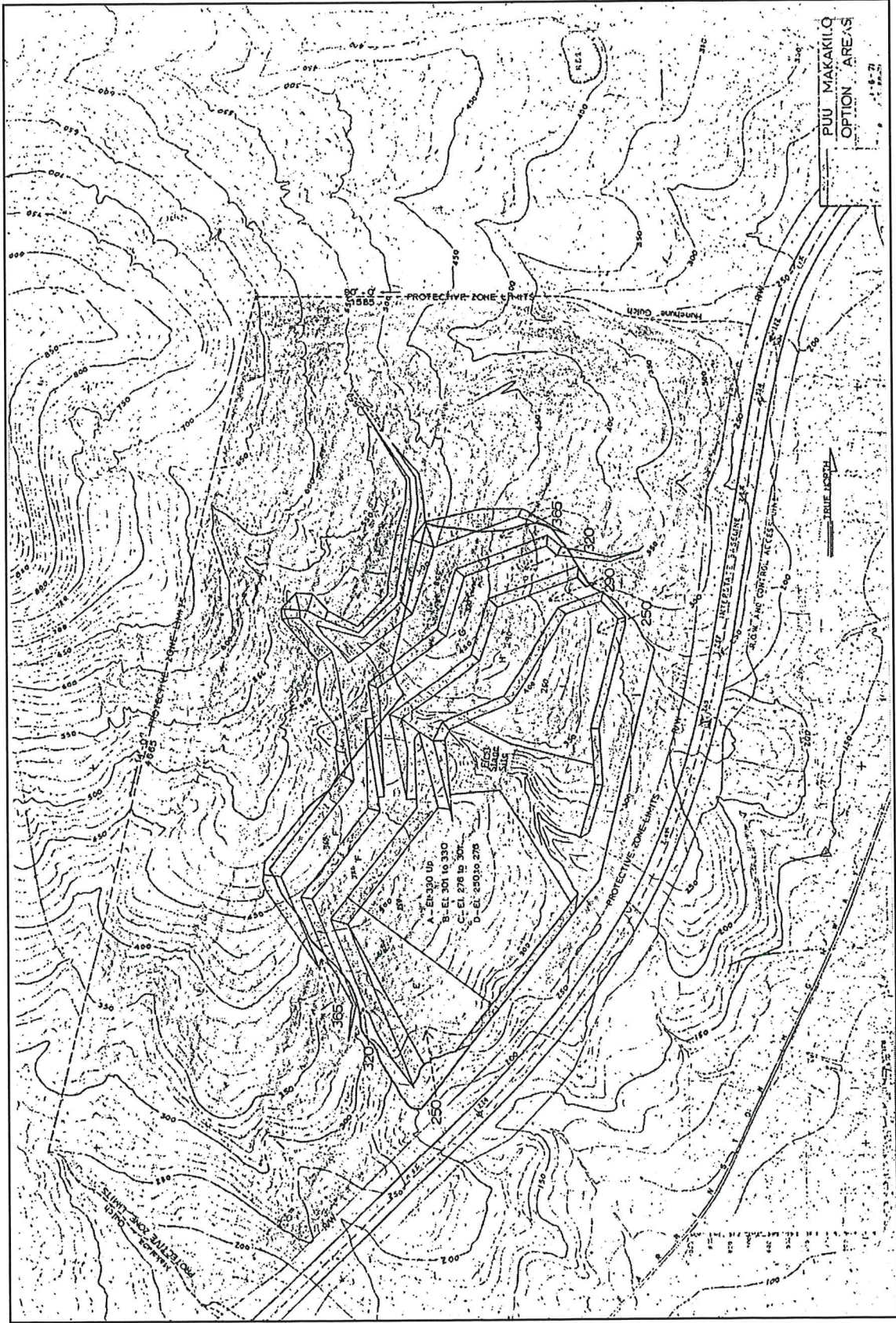


EXHIBIT "A"

Quarry:	93 Acres
Buffer:	178 Acres
Total:	271 Acres

NOT TO SCALE



NORTH



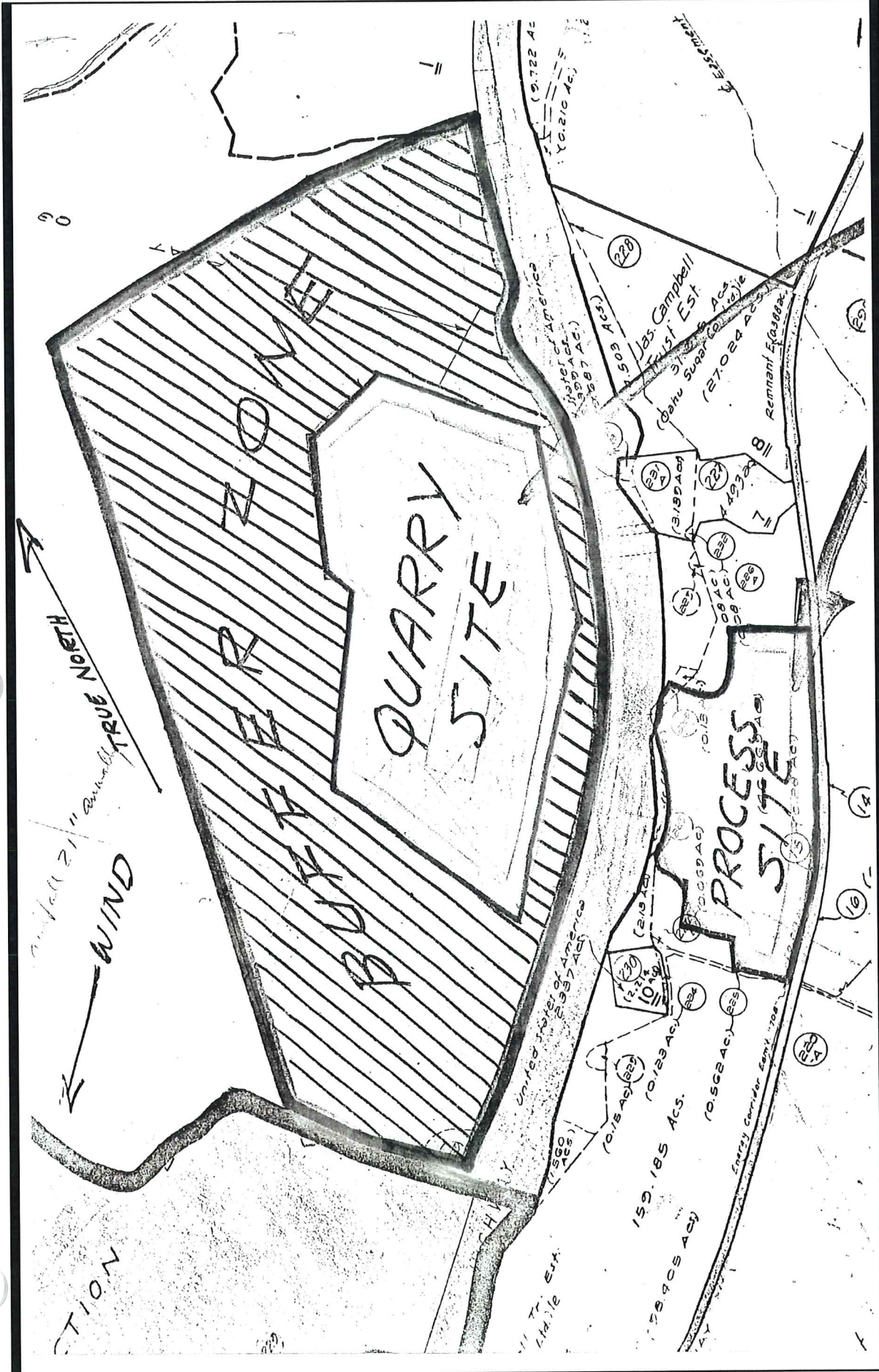


Figure 7
ATTACHMENT TO
CITY COUNCIL RESOLUTION 95

Ewa, Oahu, Hawaii

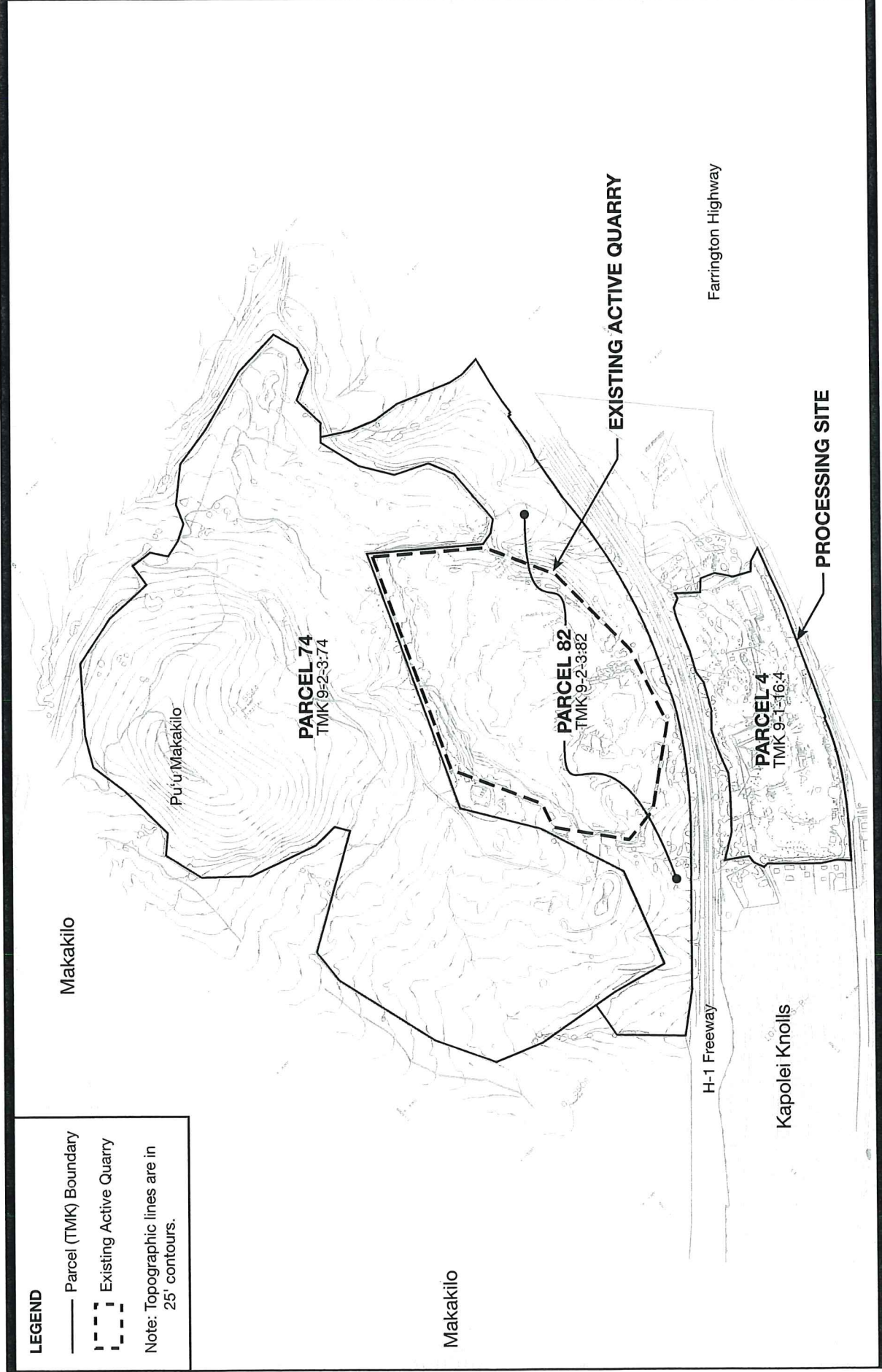
Quarry:	78 Acres
Buffer:	203 Acres
Total:	281 Acres

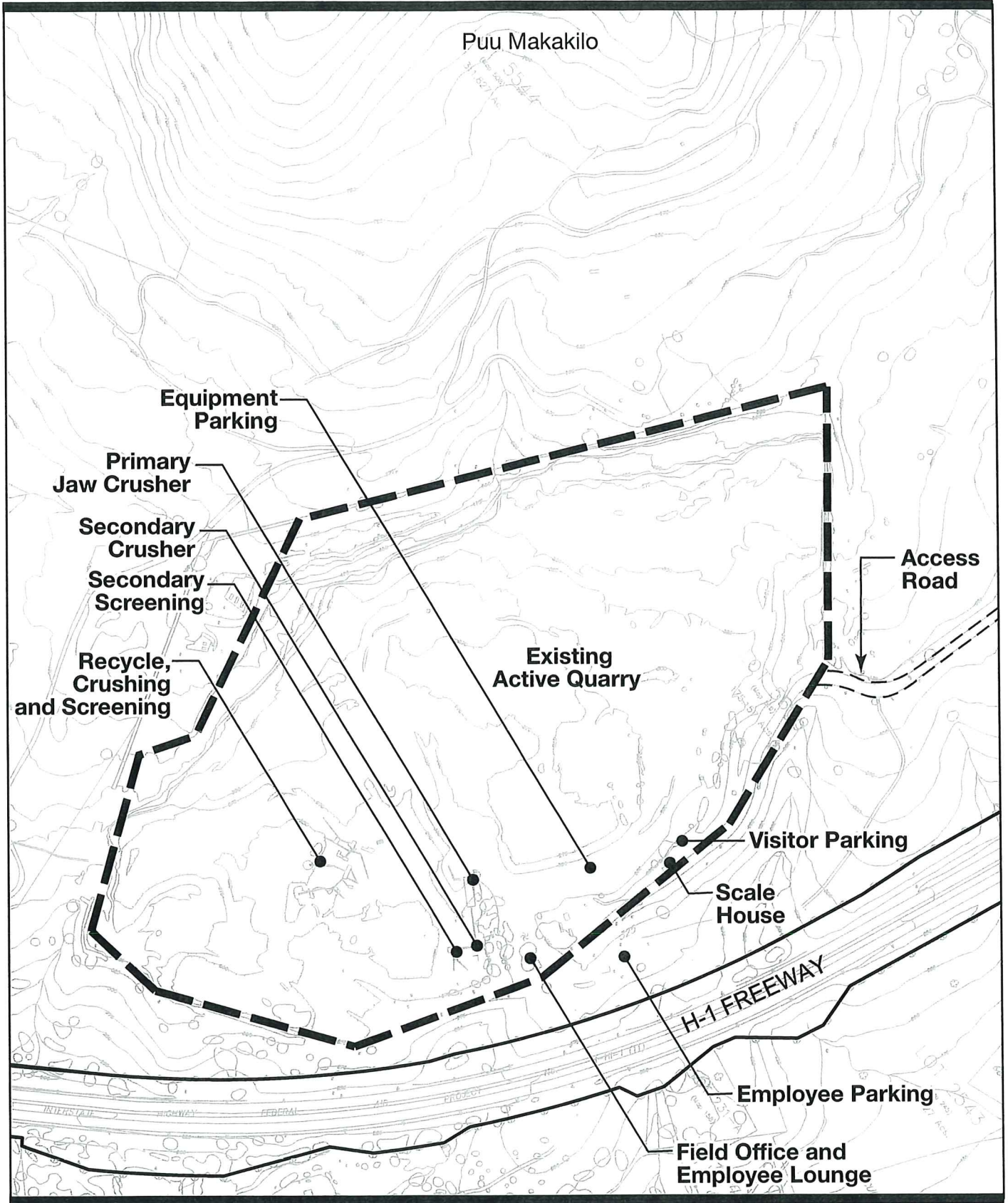
NOT TO SCALE



BeltCollins
NORTH

Figure 8
TOPOGRAPHIC MAP
PARCELS 74, 82 AND 4
Ewa, Oahu, Hawaii





Note: Topographic lines are in 25' contours.



0 250 500
SCALE IN FEET

Figure 9
EXISTING STRUCTURES AND
PARKING IN QUARRY SITE

Ewa, Oahu, Hawaii

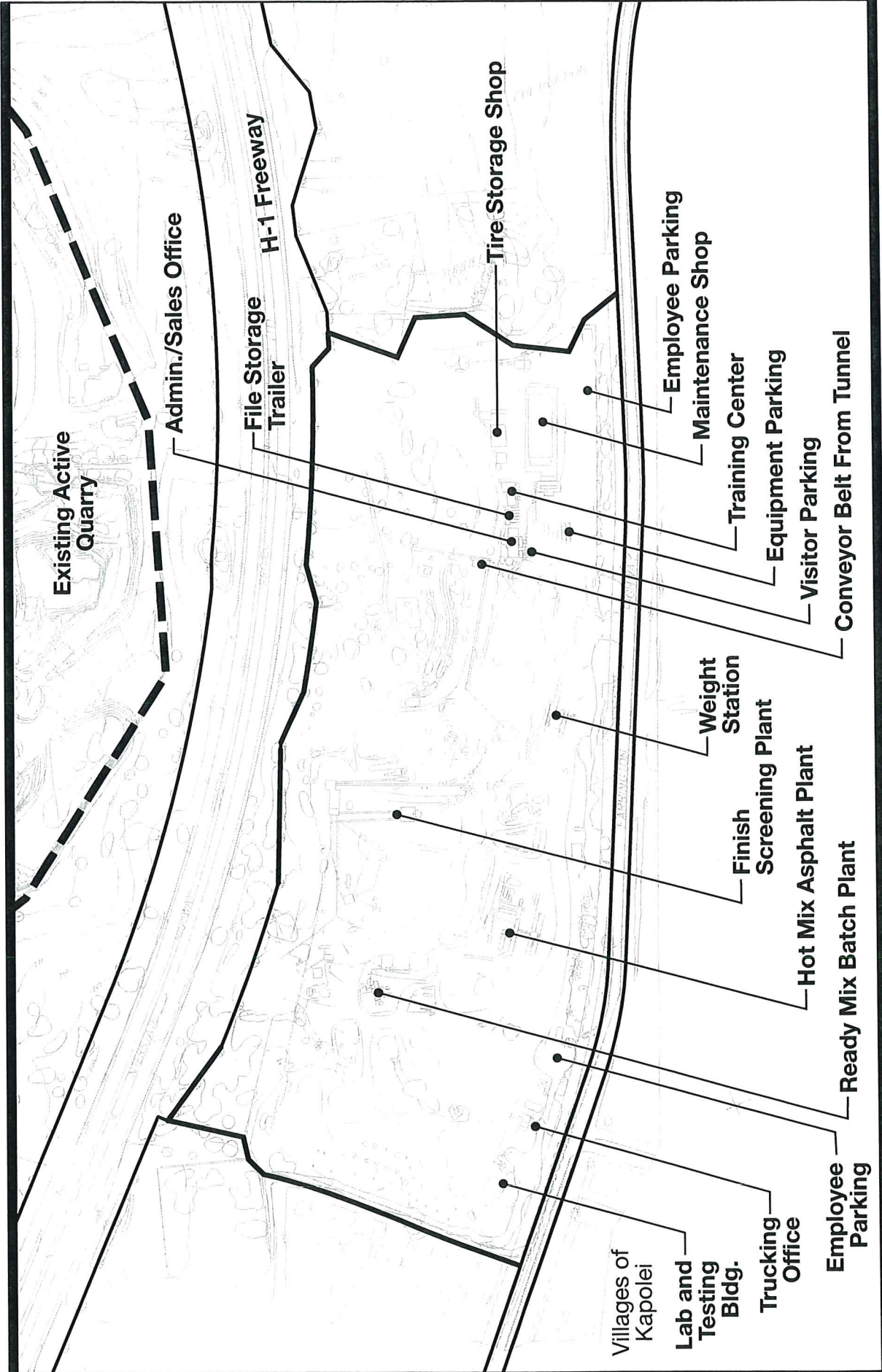
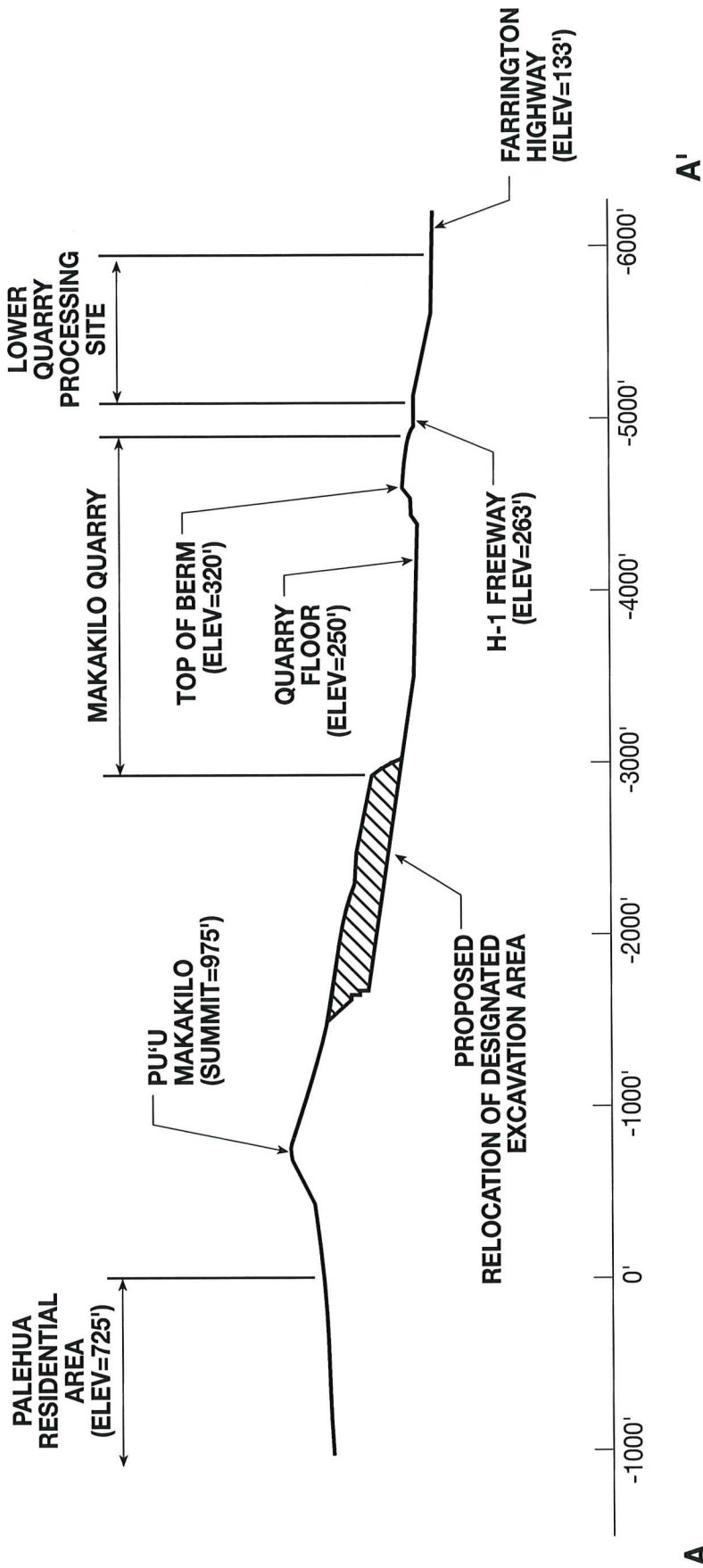


Figure 10
EXISTING STRUCTURES AND
PARKING IN PROCESSING SITE

Ewa, Oahu, Hawaii





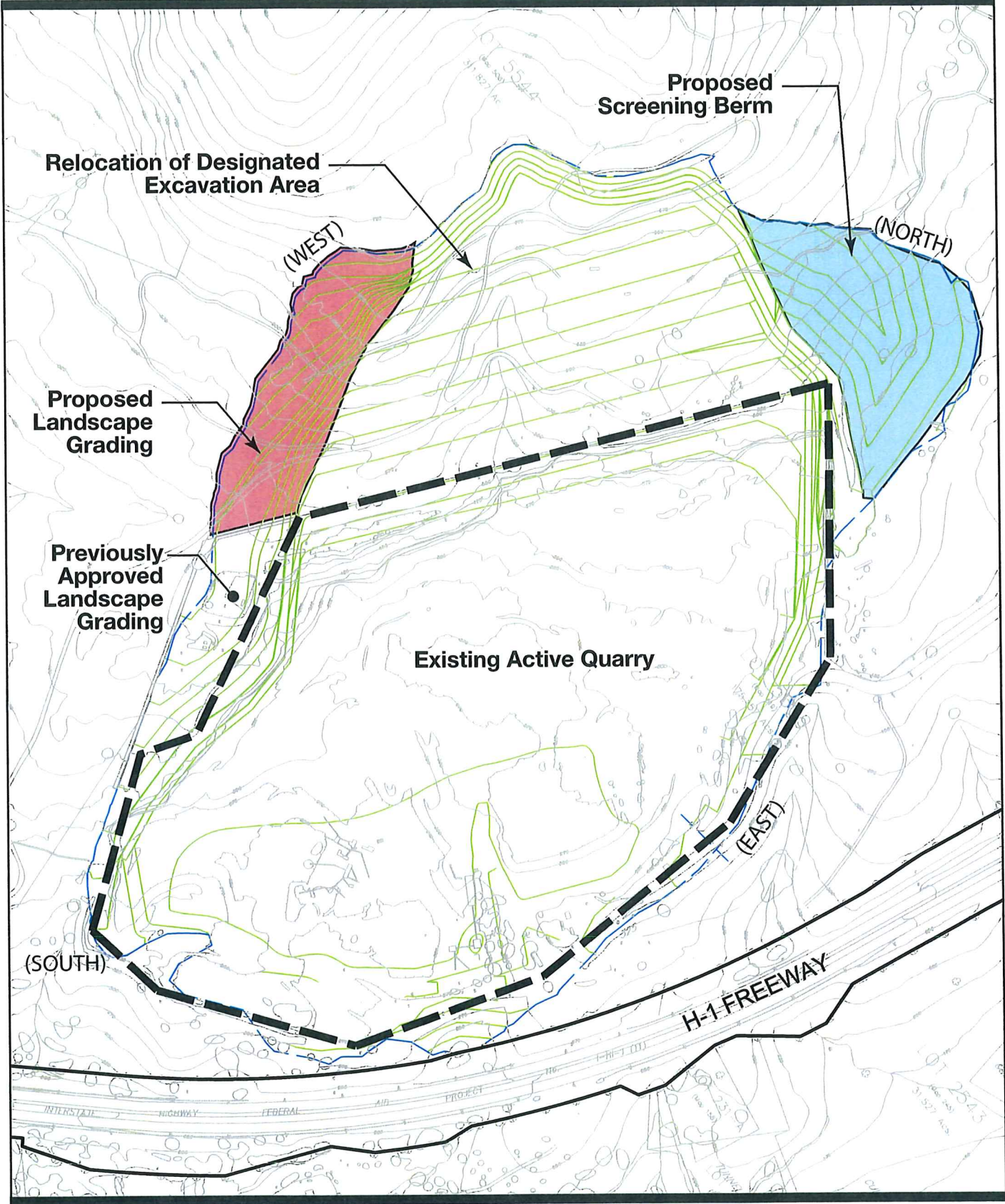
Notes:
 1. Annotated elevations are approximate and are noted to demonstrate the difference between locations.
 2. Elevations are in feet above mean sea level.

Note: See Figure 5 for location of Section A-A' line.

Figure 11
SECTION A-A' OF EXISTING QUARRY AND PROPOSED RELOCATION OF DESIGNATED EXCAVATION AREA

Ewa, Oahu, Hawaii





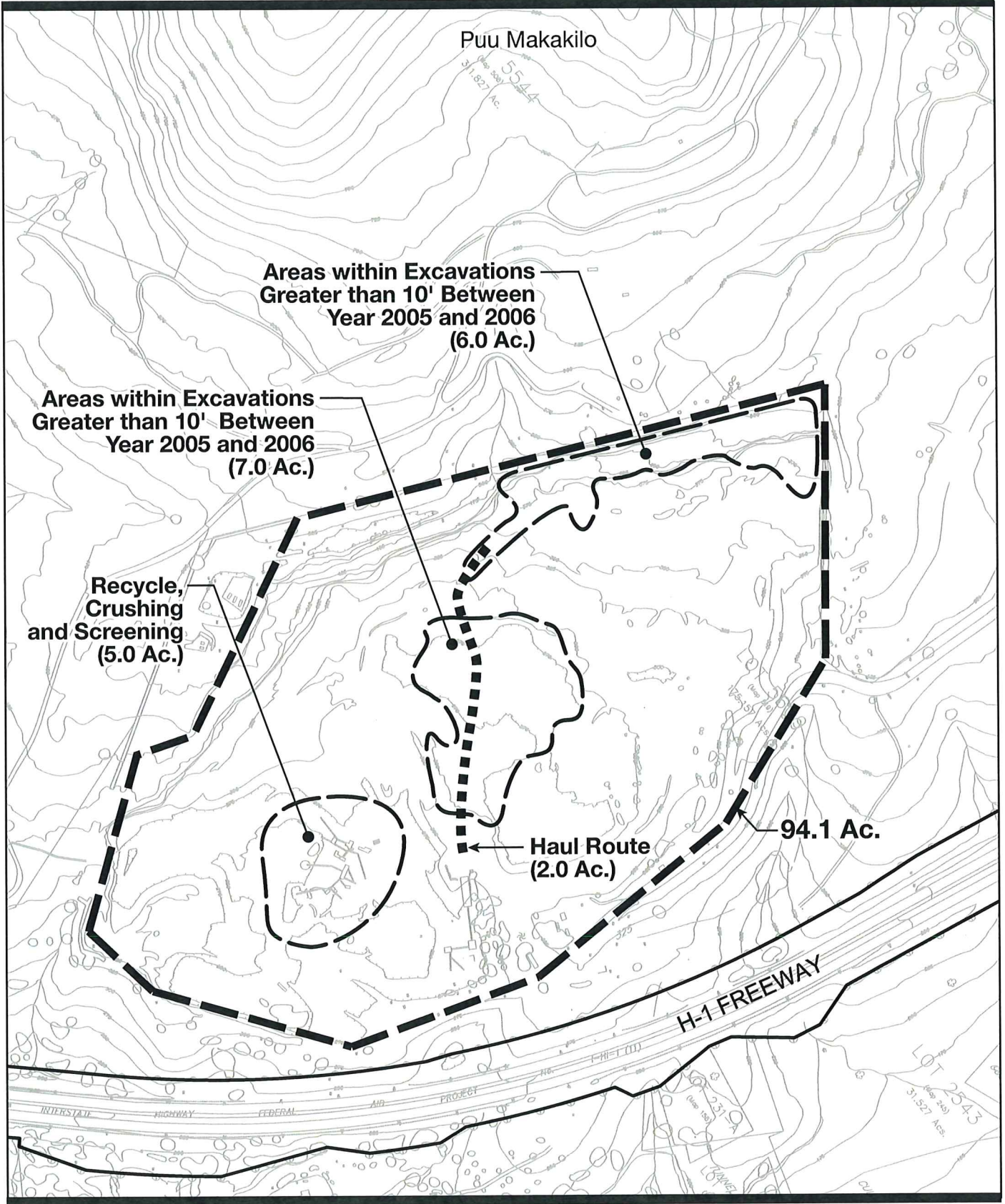
Note: Topographic lines are in 25' contours.



0 250 500
SCALE IN FEET

**Figure 12
PROPOSED GRADING**

Ewa, Oahu, Hawaii



Note: Topographic lines are in 25' contours.



Figure 13
ACTIVE QUARRY, OCTOBER 2005
THROUGH SEPTEMBER 2006

Ewa, Oahu, Hawaii

EXHIBIT XIX

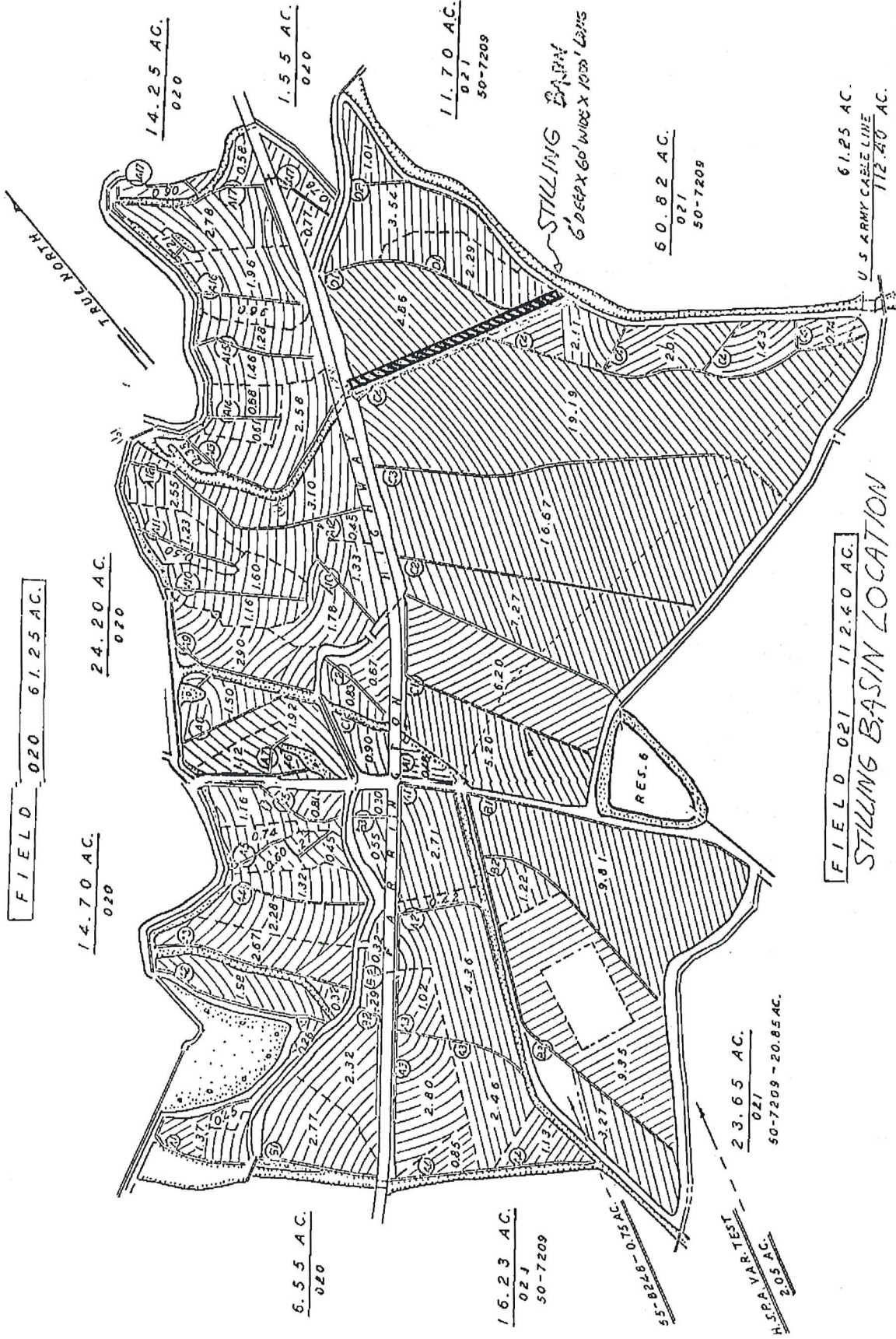
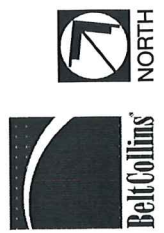


Figure 14
SETTLING BASIN AS DEPICTED IN
1973 APPLICATION, EXHIBIT XIX

Ewa, Oahu, Hawaii

FIELD 021 112.40 AC.
STILLING BASIN LOCATION



NOT TO SCALE

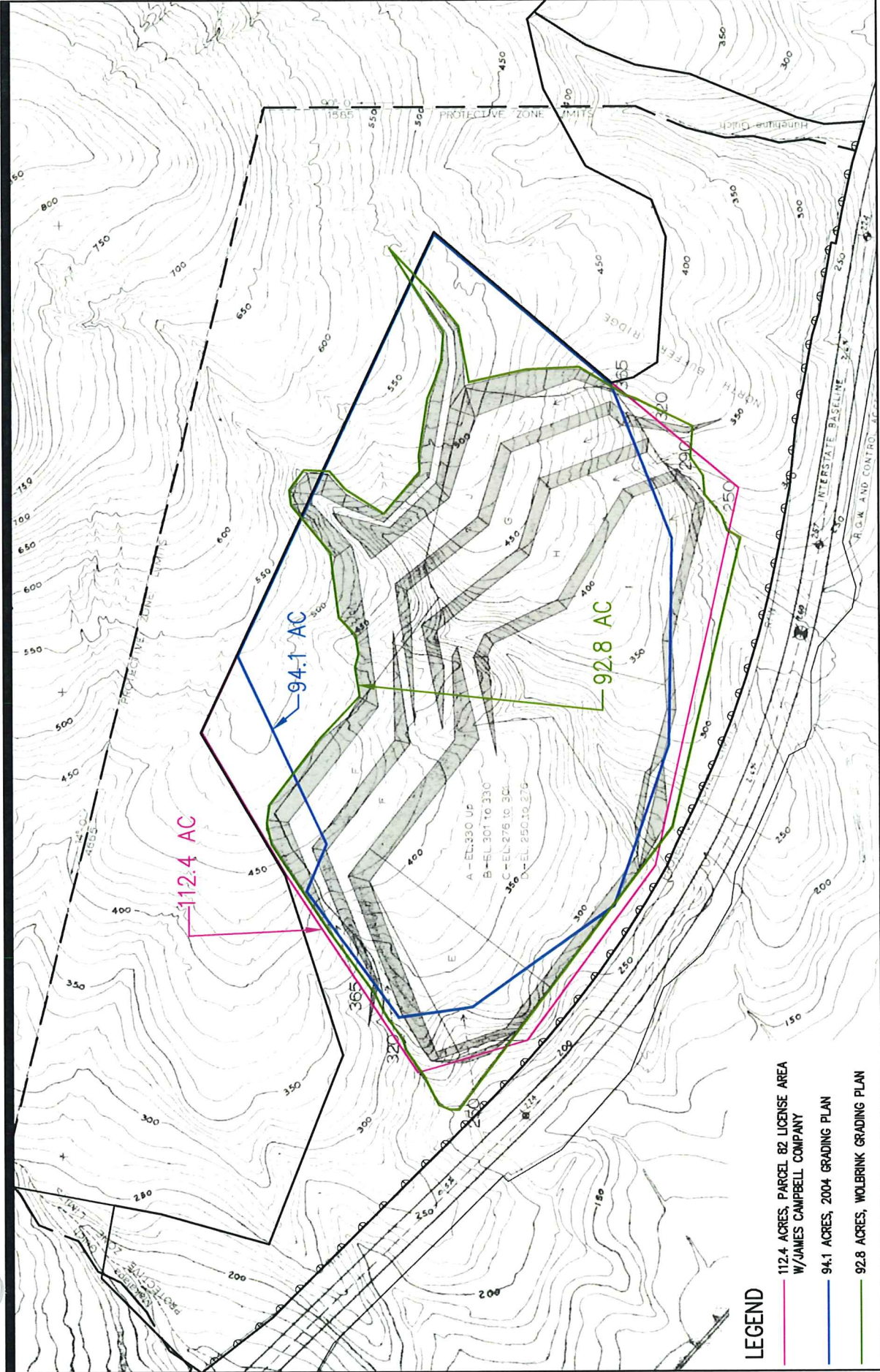


Figure 15
COMPARISON OF 1973 EXHIBIT A TO PC&R DECLARATION
WITH 2004 REVISED GRADING PLAN AS ACCEPTED BY DPP

Ewa, Oahu, Hawaii

Belt Collins
 NORTH

0 50 100
 SCALE IN FEET

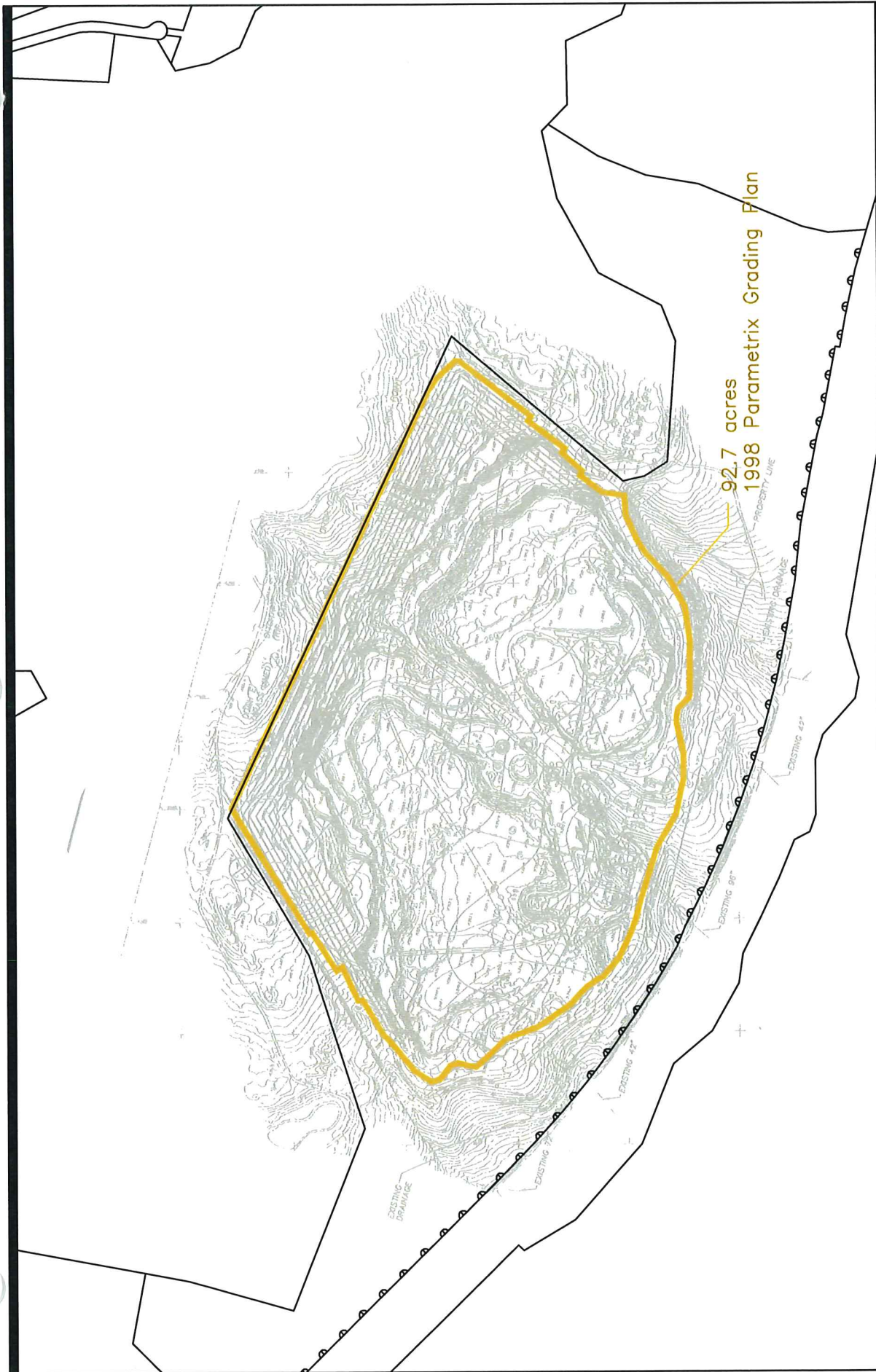


Figure 16
JULY 1998 PARAMETRIX FINAL GRADING PLAN

Ewa, Oahu, Hawaii



NORTH



0 300 600
SCALE IN FEET

EXHIBITS

13 EXHIBITS

Exhibit A Resolution (72/CUP-15)

Exhibit B State Land Use Approval of Quarry (SP73-147)

Exhibit C Compliance of Conditions of Resolution 95

- C-1 Satisfaction of Condition #2
- C-2 Dames & Moore Report on Blasting
- C-3 Semi-Annual Reporting, Condition 5, 1976 to 2007
- C-4 Entry sign to Processing Site
- C-5 Entry Signs to Active Quarry
- C-6 Zoning Variance 2002/VAR-51
- C-7 Engineering Reports, July 1998 and March 2004
- C-8 1973 PC&R Declaration
- C-9 Attachment of Declaration 2003
- C-10 Letter re 1973 Declaration

Exhibit D Zoning Variance 2002/VAR-51

Exhibit E Recycle Solid Waste Permit

Exhibit F Rescission 88CUP1-30

Exhibit G Tunnel Easement and Correspondence with DOT Highways

Exhibit H January 15, 2007 MSHA Report and U.S. Department of Labor Certificate of Achievement

Exhibit I Explosives Permit

Exhibit J Engineering Reports (July 1998 and March 2004)

Exhibit K Draft Engineering Report (April 2007)

Exhibit L Makakilo Golf Course Grading Permits

Exhibit M EPA letter re closure of Large Capacity Cesspool (March 9, 2006) and State of Hawaii, Individual Wastewater system Plans (March 22, 2005)

Exhibit N State Well Permit

Exhibit O Clean Air Branch Permits

Exhibit P Attachment of Declaration 2003

Exhibit Q Draft Joint Development Agreement

Exhibit R Seismic Reporting

Exhibit S Geologic Description of Quarries on Oahu, Hawaii

Exhibit T DPP April 2004 approval of Minor Modification to 72/CUP-15

Exhibit U PC&R 1973 CUP and SUP Applications

Exhibit V PC&R 1972 Application, Pages 5, 9, and 10

RESOLUTION

WHEREAS, the Planning Commission held public hearings on January 3 and 31, 1973, to consider the application of Pacific Concrete and Rock Company, Limited, hereinafter referred to as the "APPLICANT," for a Conditional Use Permit to establish and conduct rock quarrying operations on a total of approximately 295 acres of land zoned AG-1 Restricted Agricultural District and situated in "Puu Makakilo," Honouliuli, Ewa, Oahu, Hawaii, also identified as portion of Parcel 2 of Tax Map Key 9-2-03, and portion of Parcel 4 of Tax Map Key 9-1-16; and

WHEREAS, the APPLICANT proposes said quarrying on a site containing approximately 260 acres of land of which 72 acres will be the actual quarry and the remaining 188 acres retained as a buffer area. The extraction of rocks will involve detonation of explosives. The primary and secondary crushing units are to be located in this area; and

WHEREAS, the APPLICANT further proposes use of a second site containing approximately 35 acres, located makai of said quarry and across the H-1 Freeway, wherein the shops, offices, scales, processing and concrete batching plants will be located and the rocks stockpiled; and

WHEREAS, the Planning Director's report established guidelines for the end configuration of the quarry area so that the land will be left in a manner which would maximize the potential for residential development that would be consistent with the surrounding natural areas. Said guidelines are as follows:

1. The ridges on the Makakilo side and on the Honolulu side should be left in its natural state because of the visual buffer they provide;
2. The ultimate quarry land forms should be so designed so that the development of this area can be easily integrated with the future development of the surrounding areas to form a total community;
3. Large plateau areas should be created in order to provide for a maximum flexibility for future residential design. These plateaus should also be arranged to provide for ease of circulation within themselves as well as with the surrounding areas;
4. There should be a gradual sloping of the ultimate quarry land forms in order that the end configuration will be more in keeping with surrounding land forms of Puu Makakilo; and

RESOLUTION

WHEREAS, on February 28, 1973, the Planning Commission, having duly considered all of the evidence and reports offered, recommended to the City Council an approval of the subject application for a Conditional Use Permit with certain conditions enumerated below; now, therefore,

BE IT RESOLVED by the Council of the City and County of Honolulu that a Conditional Use Permit be issued to the APPLICANT under the following conditions:

1. The provisions set forth in the submitted application marked Exhibit "B" and on file with the Planning Department shall be complied with except as may be altered by any of the conditions stated hereunder;
2. The applicant shall prepare and submit to the Planning Director for his review and approval a revised grading plan for the quarry area;
3. The proposed use shall adhere to the noise regulations of the Comprehensive Zoning Code and to any further regulations as may be promulgated by the Department of Health. If necessary, the Planning Director may require the applicant to conduct a noise study. Said study, if required, shall be conducted in a manner acceptable to the Planning Director and its results shall be submitted to the Planning Director for his review and approval. If the results of said study indicate noise levels to be in excess of applicable standards, the applicant shall be required to take corrective actions in a manner acceptable to the Planning Director;
4. Prior to commencing the quarry operation, the applicant in cooperation with the United States Department of the Navy shall conduct studies necessary to determine the probable effect of the proposed quarry operation on the Navy's water distribution system at Barber's Point. If such studies indicate that said water distribution system may be adversely affected, the applicant shall revise the proposed operation in a manner acceptable to the Planning Director and the United States Department of the Navy;
5. The applicant shall submit regularly on a six month basis a report indicating the status of the operation noting his affirmative actions taken to comply with the conditions herein contained. This report shall also contain:
 - a. Observations of fugitive dust.
 - b. A report on replanting activities, including the areas replanted, and the type of vegetation planted.

RESOLUTION

- c. A report of any citizen's complaints relating to the operation along with the actions taken to ameliorate those complaints.
6. Signs shall be provided in accordance with the regulations set forth under Section 21-404 of the Comprehensive Zoning Code;
7. If for any reason either the Conditional Use Permit or the Special Use Permit is denied, the other shall automatically be declared null and void;
8. After the issuance of the subject permits, the City Council may at any time upon finding that any one of the conditions imposed herein is not being complied with by the applicant, authorize the Planning Director to suspend such operation until compliance of said conditions is obtained or to revoke the permit;
9. Any modification to the conditions stated herein shall be subject to the approval of the City Council;
10. The City Council may impose additional conditions after the approval of subject permits when it becomes apparent that a modification is necessary and appropriate;
11. The applicant shall file with the Bureau of Conveyances or the Assistant Registrar or the Land Court a declaration of the restrictive conditions stated herein;
12. The applicant shall present to the Planning Department certified copies of the documents issued by the Bureau of Conveyances or the Assistant Registrar as evidence of recordation.

BE IT FINALLY RESOLVED by the Council of the City and County of Honolulu that the Clerk be, and she is, hereby directed to transmit copies of this resolution to E. B. Connell, Chairman of the Planning Commission; Robert R. Way, Planning Director; State Department of Health; State Department of Transportation; U. S. Department of Navy (Barber's Point Naval Air Station); and Campbell Estate.

RESOLUTION

INTRODUCED BY:

George Kahane

Rudy Pacarro

Daniel Clement
 Councilmen

DATE OF INTRODUCTION:

APR 17 1973

Honolulu, Hawaii

-4-

CITY COUNCIL

CITY AND COUNTY OF HONOLULU
 HONOLULU, HAWAII

I hereby certify that the foregoing RESOLUTION was adopted by the COUNCIL of the City and County of Honolulu, by the vote and on the date indicated on the right margin hereof.

TEST: Eileen K. Lota
 EILEEN K. LOTA
 CITY CLERK

GEORGE KOGA
 CHAIRMAN & PRESIDING OFFICER

Dated APR 17 1973

ADOPTED Meeting Held			
APR 17 1973			
	AYE	NO	A/E
AKAHANE			
CHIKASUYE			
CLEMENT			
GEORGE			
LOO			
MATSUMOTO			
PACARRO			
SHIGEMURA			
KOGA			
	9	00	

Reference: B 356
 Report No. P&ZCR-461

Resolution No.

95



DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT



LAND USE COMMISSION

250 South King St. / Honolulu, Hawaii 96813 / P. O. Box 2359 / Honolulu, Hawaii 96804

March 27, 1973

RECEIVED

MAR 29 1973

JOHN A. BURNS
Governor

GORO INABA
Chairman

EDDIE TANGEN
Vice Chairman

COMMISSION MEMBERS

- Alexander J. Napier
- Shelley M. Mark
- Sunao Kido
- Leslie E. L. Wung
- Tanji Yamamura
- Stanley S. Sakahashi

Handwritten signature/initials

TATSUO FUJIMOTO
Executive Officer

Mr. Robert B. Robinson
President and General Manager
Pacific Concrete & Rock Co., Ltd.
2344 Pahounui Drive
Honolulu, Hawaii 96819

Dear Mr. Robinson:

The original of the attached letter approving the special permit request by Pacific Concrete & Rock Co., Ltd. (SP73-147) to allow sanitary landfill operation at Puu Palailai on approximately 29 acres of land described as Tax Map Key 9-1-16: portions of 6 and 20, Ewa, Oahu; and rock quarrying operations on the southeastern slopes of Puu Makakilo on approximately 295 acres of land described as Tax Map Key 9-2-03: portion of 2, and 9-1-16: portion of 4, Ewa, Oahu; both operations subject to the conditions stipulated by the City Planning Commission of the City and County of Honolulu; is on file in the office of the Planning Commission, Honolulu, Hawaii.

Very truly yours,

Tatsuo Fujimoto
TATSUO FUJIMOTO
Executive Officer

Encls.
cc: Ben Kaito

Handwritten signature/initials

STATE OF HAWAII
LAND USE COMMISSION

MEMORANDUM

March 23, 1973
2:30 p.m.

TO: Land Use Commission

FROM: Staff

SUBJECT: SP73-147 - PACIFIC CONCRETE & ROCK CO., LTD.

Pacific Concrete & Rock Co., Ltd. has submitted special permit requests involving the following:

Area 1 - Sanitary landfill operation within the existing quarry at Puu Palailai, situated in the Agricultural District, Ewa, Oahu, and described as Tax Map Key 9-1-16: portions of 6 and 20, comprising approximately 29 acres.

Area 2 - Rock quarrying operations makai of Puu Makakilo, situated in the Agricultural District, Ewa, Oahu, and described as Tax Map Key 9-2-03: portion of 2, and 9-1-16: portion of 4, on approximately 295 acres.

In order that the proceedings on the above requests may be simplified and facilitated, the staff will discuss each area separately.

AREA 1 - SANITARY LANDFILL OPERATION

The 29-acre site consists of an exhausted quarry pit which is situated south of the Makakilo Urban District in the vicinity of the Palailai Interchange of H-1 Highway. The pit averages 90 feet in depth, but contains walls at the mauka end which are 150 feet in height. Land uses in the area are residential developments and vacant lands in the Makakilo Urban District and cane cultivation in the surrounding Agricultural District. The site itself contains only 1-1/2 year's deposit of material to be quarried. Other than for landfill purposes, the pit has no economical or practical value if not restored.

Petitioner states that the consulting firm of Metcalf & Eddy has recommended to the City that a major sanitary landfill be established to replace the obsolete and ecologically unsatisfactory Waipahu dump which was closed on December 31, 1972. Until a replacement area is found, all refuse will be taken to the Windward Oahu Kapaa dump site. The proposed 29-acre site, which is under a 10 year lease by Campbell Estate authorizing the petitioner to operate a sanitary landfill, can be profitably operated at a charge per ton to the City of no more than it would cost the City to operate.

Exhibit B

The petitioner estimates that the proposed landfill operation will result in a 17% increase in traffic over that presently generated by the quarry operation. This is based on an estimated 135 trips by refuse trucks and 10 additional trips which are required to haul cover material for the landfill. Approximately 84% of the refuse traffic will come from the Honolulu direction, and the remaining 16% will come from Waianae, Campbell Industrial Park and Makakilo. Access will be from Farrington Highway. Residential areas will not be directly affected.

Hours of operation will be from 6:00 a.m. to 5:00 p.m. Monday through Friday and 7:00 a.m. to 3:00 p.m. on Saturdays. Initially, the floor of the pit will be sealed with a 12-inch layer of impermeable engineered soil stratum approved by the Board of Water Supply and overlain by a 12 inch pervious drainage stratum of crushed rock which will lead to a sump-well. The sump-well will allow for inspection or removal of leachate, if necessary.

A D-8 tractor will spread and compact refuse in 2 foot thick layers. It is estimated that 500 to 600 tons will be compacted daily. At the close of day, the working face will be covered by a 6 inch layer of soil, cinder, and small rocks, thus creating a dense "cell" which would exclude rodents and insects as well as eliminate odors and unsightliness. An estimated 3.3 million cubic yards of refuse can be accommodated by this modern cell method. All refuse will be accepted except chemicals, radioactive wastes, and whole animal carcasses. Neither the entrance nor the fill itself will be visible from Makakilo city. The landfill operation will convert a difficult to utilize and dangerous pit into a well graded area suitable for recreational or agricultural use.

COUNTY RECOMMENDATION

At its meeting of February 28, 1973, the City Planning Commission voted to recommend approval of this special permit subject to the final approval of the State Land Use Commission and further to obtain a Conditional Use Permit from the City. The recommendation for approval was further conditioned by the following:

- "1. The provisions set forth in the submitted application marked Exhibit A shall be complied with except as may be altered by any of the conditions stated hereunder;
- "2. The applicant shall comply with all requirements which may be imposed by the State Department of Health, Board of Water Supply, State Fire Marshall, and the Department of Public Works;

- "3. The permits hereby granted shall expire at the end of 5 years from the date of issuance. The subject permits may upon their expiration be renewed for another 5-year period by the City Council provided the applicant applies for renewal of the Conditional Use and Special Use Permits and provided further that the conditions of the permits have not been violated during the initial 5-year term or if the conditions in the area have not changed in such a manner as to justify refusal of the renewal;
- "4. The source for the landfill cover material shall be subject to the approval of the Planning Director and other appropriate governmental agencies.
- "5. If for any reason, either the Conditional Use Permit or the Special Use Permit is denied, the other shall automatically be declared null and void;
- "6. Signs shall be provided in accordance with the regulations set forth under Section 21-404 of the Comprehensive Zoning Code;
- "7. The proposed use shall comply with the noise regulations of the Comprehensive Zoning Code and with any other more restrictive noise regulations as may be promulgated by the Department of Health. To determine whether or not noise regulations are being complied with, the applicant shall retain a qualified noise consultant to conduct a noise study within 6 months from the date the use commences. Said study shall be conducted at a time and under conditions acceptable to the Planning Director. The results of the study shall be submitted to the Planning Director for his review and approval. If the study indicates that the use is not operating in compliance with the noise regulation, the applicant shall be required to take corrective actions in a manner acceptable to the Planning Director. Additional noise studies shall be conducted as may be determined necessary and appropriate by the Planning Director.
- "8. After the issuance of the subject permit, the City Council may at any time, upon finding that any one of the conditions imposed herein is not being complied with by the applicant, authorize the Planning Director to suspend such operation until compliance with said conditions is obtained or to revoke the permit;
- "9. Any modification to the conditions stated herein shall be subject to the approval of the City Council;

- "10. The City Council may impose additional conditions after the approval of the subject permits when it becomes apparent that a modification is necessary and appropriate;
- "11. The applicant shall file with the Bureau of Conveyances or the Assistant Registrar of the Land Court, a declaration of the restrictive conditions stated herein;
- "12. The applicant shall present to the Planning Department certified copies of the document issued by the Bureau of Conveyances or the Assistant Registrar as evidence of recordation."

The City's General Plan designates the property for Agriculture and the zoning is AG-1 Restricted Agricultural District. No Detailed Land Use Map or Development Plan has been adopted for this area.

A review of the proposed sanitary landfill operation finds that adequate safeguards have been incorporated in the conditions imposed by the City agency to protect the health, safety and welfare of the public and to minimize or eliminate any adverse effects on surrounding property. Based on information presented in the Final Environmental Impact Statement for the proposed landfill operation and upon the recommendations of the Office of Environmental Quality Control, the Environmental Impact Statement was approved by Governor Burns on January 13, 1973. Further, the petitioner's technical and professional consultants have addressed the project in sufficient detail to allow the establishment of preventive and corrective measures before actual initiation of the project.

Based on the above, the staff finds that the landfill operation substantially meets the guidelines for determining an "unusual and reasonable use" and therefore recommends approval of the sanitary landfill operation as conditioned by the City Planning Commission.

AREA 2 - ROCK QUARRYING AND ALLIED OPERATIONS

The petitioner proposes to establish a rock quarrying operation and allied uses on a total of 295 acres of land situated on the southeastern slopes of Puu Makakilo and located about 1.5 miles east of Area 1. The proposed quarry site of 72 acres and a buffer area comprising 188 acres abut the mauka side of the H-1 Highway.

Immediately makai of the highway and quarry site is another 35 acres proposed for accessory uses such as a shop, office, scale, processing area and a concrete batching plant.

Presently, the mauka area of 260 acres containing the proposed quarry and buffer area is used for cattle grazing. The quarry site is bounded on 2 sides by gulches and divided in the center by another gulch. The makai area of 35 acres containing the processing and office facilities is presently in cane cultivation. The developed portion of the Makakilo Urban District lies approximately one mile west of the proposed quarry site, and the Waipahu Urban District lies 3 miles to the east.

The petitioner states that Pacific Concrete and Rock Co., Ltd. has been in business on Oahu for 22 years; that it is one of 2 major suppliers of concrete on Oahu and supplies 40% of the island's needs; that it employs 300 people and contributes approximately \$207,000 in State taxes annually.

Pacific Concrete's existing quarry will be exhausted in 1-1/2 years and has been proposed for a sanitary landfill site (Area 1). Approximately 8 years ago, after extensive test drillings and studies, a new source of rock was located at the site now under consideration. It is the only known source within economical distance of Honolulu. Because of the topography, the site is well hidden except from distant scrutiny. A new quarry site is essential to the continued existence of the company.

Approximately 500,000 tons of basalt aggregate for concrete production and approximately 250,000 tons of road and fill rock will be produced at the new site on an annual basis.

Quarrying operations mauka of the H-1 will involve clearing the overburden; drilling of the basaltic, or blue rock; placement and detonation of explosives (which is controlled by the State Division of Industrial Safety), in order to reduce all rock to no larger than 4 foot pieces; loading and hauling to primary crusher for crushing rocks to 10 inch size, conveyance to the secondary crusher for reduction to 3 inch size; conveyance to surge piles, and finally conveyance by a 42 inch belt to the makai processing area through a 10 foot square tunnel under H-1. At no time will more than 15 acres be stripped for quarrying.

On the makai processing site, the 3 inch rock will be stacked into grades "A" and "B" surge piles; sized by a series of screens; conveyed into finished stockpiles or into reduction crushers for sand production.

At all critical points, water with a wetting agent will be sprayed on the rocks; the primary crusher, batching plant, and screens will be totally housed to eliminate noise and stray dust; noise and dust levels will be below all government standards at the buffer zone boundaries; and berms will be constructed and plantings provided to

shield the operation visually. Over 500 trees and 1,000 shrubs will be planted. In total, \$565,000 will be spent on pollution control measures, excluding maintenance costs.

Only 1 access will be provided off Farrington Highway. The total daily traffic is 36 mixer truck round trips from 6:00 a.m. to 4:00 p.m. and 91 dump truck round trips from 7:00 a.m. to 12:00 p.m.

The petitioner states that the area "will have been leveled to a predetermined plan for residential construction in concert with the City's detailed land use map" and that site preparation costs will be nil since all final quarry grades are designed for home and school buildings.

Maps submitted by the petitioner show that the completion of the quarrying operation will result in a series of 4 benches which are proposed for single family residential use. The lowest bench abutting the H-1 is proposed for a school and park site. The elevation ranges from about 250 feet at the lowest level to 365 feet at the uppermost level, with 30 to 45 feet differences between levels. A 56 foot access road is shown leading to Makakilo City and in the direction of Palehua Road.

COUNTY RECOMMENDATION

At its meeting of February 28, 1973, the City Planning Commission voted to recommend approval of this special permit subject to the final approval of the Land Use Commission and further to obtain a Conditional Use Permit from the City. The recommendation was further conditioned by the following:

- "1. The provisions set forth in the submitted application marked Exhibit "B" and on file with the Planning Department shall be complied with except as may be altered by any of the conditions stated hereunder;
- "2. The applicant shall prepare and submit to the Planning Director for his review and approval a revised grading plan for the quarry area;
- "3. The proposed use shall adhere to the noise regulations of the Comprehensive Zoning Code and to any further regulations as may be promulgated by the Department of Health. If necessary, the Planning Director may require the applicant to conduct a noise study. Said study, if required, shall be conducted in a manner acceptable to the Planning Director and its results shall be submitted to the Planning Director for his review and approval. If the results of said study

indicate noise levels to be in excess of applicable standards, the applicant shall be required to take corrective actions in a manner acceptable to the Planning Director;

- "4. Prior to commencing the quarry operation, the applicant in cooperation with the United States Department of the Navy shall conduct studies necessary to determine the probable effect of the proposed quarry operation on the Navy's water distribution system at Barber's Point. If such studies indicate that said water distribution system may be adversely affected, the applicant shall revise the proposed operation in a manner acceptable to the Planning Director and the United States Department of the Navy.
- "5. The applicant shall submit regularly on a six month basis a report indicating the status of the operation noting his affirmative actions taken to comply with the conditions herein contained. This report shall also contain:
 - a. Observations of fugitive dust.
 - b. A report on replanting activities, including the areas replanted, and the type of vegetation planted.
 - c. A report of any citizen's complaints relating to the operation along with the actions taken to ameliorate those complaints.
- "6. Signs shall be provided in accordance with the regulations set forth under Section 21-404 of the Comprehensive Zoning Code;
- "7. If for any reason either the Conditional Use Permit or the Special Use Permit is denied, the other shall automatically be declared null and void;
- "8. After the issuance of the subject permits, the City Council may at any time upon finding that any one of the conditions imposed herein is not being complied with by the applicant, authorize the Planning Director to suspend such operation until compliance of said conditions is obtained or to revoke the permit.
- "9. Any modification to the conditions stated herein shall be subject to the approval of the City Council.
- "10. The City Council may impose additional conditions after the approval of subject permits when it becomes apparent that a modification is necessary and appropriate.

"11. The applicant shall file with the Bureau of Conveyances or the Assistant Registrar of the Land Court a declaration of the restrictive conditions stated herein;

"12. The applicant shall present to the Planning Department certified copies of the documents issued by the Bureau of Conveyances or the Assistant Registrar as evidence of recordation."

Condition #4 was established as a result of a letter from the Navy expressing concern over possible damage to its water supply and distribution system which is located 1/4 mile away from the quarry site. It was noted that the inclusion of condition #4 was acceptable to the Navy.

Condition #2 was included as a result of the City Planning Director's concern over the final configuration of the site after quarrying operations have been completed. He felt that other alternatives should be considered which would "maximize the potential for residential development that would be consistent with the surrounding natural areas." In short, it was felt that the concept of a large flat area near the freeway with narrow, upper terraces does not allow for flexibility in residential design.

Review of the other conditions imposed by the City Planning Commission finds that the public's welfare is adequately protected and the surrounding properties will not be adversely affected. It is further noted that the proposed use will help to alleviate the high demand for rock and concrete products by the construction industry; that public agencies would not be unduly burdened to provide services; that the quarry site is not highly suited for agricultural purposes; and that the quarrying operation would ultimately result in a more productive land use for the site in question.

On the basis of information presented in the Final Environmental Impact Statement for the proposed quarry and upon the recommendation of the Office of Environmental Quality Control, the Environmental Impact Statement was approved by Governor Burns on January 13, 1973.

Based on the above, the staff concludes that the proposed use is an "unusual and reasonable" use within the Agricultural District and concurs with the City Planning Commission in recommending approval of this special permit, subject to the conditions imposed. It should be noted that the recommendation for approval will in no way constitute a commitment for subsequent approval of a residential use after the termination of the quarrying operation.

Grace Pacific Corporation
 Compliance with Conditions of Resolution 95
 March 10, 2007

1.	The provisions set forth in the submitted application marked Exhibit "B" and on file with the Planning Department shall be complied with except as may be altered by any of the conditions stated hereunder.	The provisions have been complied with.
2.	The applicant shall prepare and submit to the Planning Director for his review and approval a revised grading plan for the quarry area.	See Exhibit C-1
3.	The proposed use shall adhere to the noise regulations of the Comprehensive Zoning Code and to further regulations as may be promulgated by the Department of Health. If necessary, the Planning Director may require the applicant to conduct a noise study. Said study, if required, shall be conducted in a manner acceptable to the Planning Director for his review and approval. If the results of said study indicate noise levels to be in excess of applicable standards, the applicant shall be required to take corrective actions in a manner acceptable to the Planning Director.	Noise study was not subsequently required by Planning Director.
4.	Prior to commencing the quarry operation, the applicant in cooperation with the United States Department of the Navy shall conduct studies necessary to determine the probable effect of the proposed quarry operation on the Navy's water distribution system at Barbers Point. If such studies indicate that the said water distribution system may be adversely affected, the applicant shall revise the proposed operation in a manner acceptable to the United States Department of the Navy.	See Exhibit C-2
5.	The applicant shall submit regularly on a six month basis a report indicating the status of the operation noting his affirmative actions taken to comply with the conditions herein contained. This report shall also contain : a. Observations of fugitive dust. b. A report of replanting activities, including the areas replanted, and the type of vegetation planted. c. A report of any citizen's complaints relating to the operation along with the actions taken to ameliorate those complaints.	See Exhibit C-3
6.	Signs shall be provided in accordance with the regulations set forth under Section 21-404 of the Comprehensive Zoning Code.	See Exhibit C-4 and C-5.
7.	If for any reason either the Conditional Use Permit or the Special Permit is denied, the other shall automatically be declared null and void.	Neither permit denied.

Grace Pacific Corporation
 Compliance with Conditions of Resolution 95
 March 10, 2007

8.	After issuance of the subject permits, the City Council may at any time upon finding that any one of the conditions imposed herein is not being complied with by the applicant, authorize the Planning Director to suspend such operation until compliance of said conditions is obtained or revoke the permit.	No findings made or actions taken regarding non-compliance.
9.	Any modification to the conditions stated herein shall be subject to the approval of the City Council.	See Exhibits C-6 and C-7.
10.	The City Council may impose additional conditions after the approval of subject permits when it becomes apparent that a modification is necessary and appropriate.	No additional conditions imposed.
11.	The applicant shall file with the Bureau of Conveyances or the Assistant Registrar of the Land Court a declaration of the restrictive conditions stated herein.	as to 9-1-16-4, see Exhibit C-8. As to 9-2-3-82 (formerly a portion of 9-2-3-2), see Exhibit C-9.
12.	The applicant shall present to the Planning Department certified copies of the documents issued by the Bureau of Conveyances or the Assistant Registrar as evidence of recordation.	As to 9-1-16-4, see Exhibit C-10. As to 9-2-3-82, see Exhibit C-11.

C-1

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

630 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 529-4414 • FAX: (808) 527-6749

JEREMY HARRIS
MAYOR



JAN NAOE SULLIVAN
DIRECTOR

LORETTA R.G. CHEE
DEPUTY DIRECTOR

October 19, 1998

72/CUP-15(jml)

Mr. Robert M. Creps, Vice President
Finance and Administration
Grace Pacific Corporation
P.O. Box 78
Honolulu, Hawaii 96810

Dear Mr. Creps:

Conditional Use Permit No. 72/CUP-15
Puu Makakilo Quarry - Ewa
Tax Map Key 9-2-3: 82

We have reviewed the engineering report and grading plans prepared by Parametrix, Inc., dated July 1998, and determined that they meet Condition 2 of Resolution No. 95.

As previously discussed, upon satisfaction of Condition 2, Grace Pacific intended to establish a landfill operation at the above site. However, we understand that plans have changed and land use permits to allow the landfill operation will not be forthcoming. Nevertheless, your efforts to comply with the conditions of Resolution No. 95 are appreciated.

If you have any questions, please contact Jeff Lee of our staff at 527-6274.

Very truly yours,

J. Naoe Sullivan
JAN NAOE SULLIVAN

Director of Planning and Permitting

JNS:lg
g\zd:72cup15.jml

Post-it® Fax Note	7871	Date/
To	BOB CREPS	From
Co./Dept.	GRACE PACIFIC	Co.
Phone #		Phone
Fax #	486-8025	Fax #

Exhibit C-1

C-2

RECEIVED

OCT 13 1973

LETTER REPORT

GROUND VIBRATION MONITORING
DURING BLASTING OPERATION

PLANNED QUARRY OPERATIONS
MAKAKILO, CAHU, HAWAII

FOR

PACIFIC CONCRETE AND ROCK COMPANY, LTD.

Dames & Moore Job No. 4420-011-11

EXHIBIT C-2

ANCHORAGE
ATLANTA
CHICAGO
CINCINNATI
DENVER
HOUSTON
LOS ANGELES
MEMPHIS
MIAMI
MINNEAPOLIS
NEW YORK
PHOENIX
PORTLAND
SAN ANTONIO
SAN FRANCISCO
WASHINGTON
WICHITA



DAMES & MOORE

CONSULTANTS IN THE ENVIRONMENTAL, CIVIL AND MECHANICAL ENGINEERING

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2875 SOUTH KING STREET - HONOLULU, HAWAII 96814 - (808) 946-1455
CABLE: DAMEMORE TELEX: 63-4100

October 11, 1973

Pacific Concrete and Rock Company, Ltd.
2344 Pahounui Drive
Honolulu, Hawaii 96819

Attention: Mr. Harry Cerny

Gentlemen:

Letter Report
Ground Vibration Monitoring
during Blasting Operation
Planned Quarry Operations
Makakilo, Oahu, Hawaii
For Pacific Concrete and Rock Company, Ltd.

INTRODUCTION

This letter report presents the results of our ground vibration monitoring program conducted during blasting operations at the proposed Makakilo Quarry, Oahu, Hawaii.

In this program, ground vibrations were monitored during the period of September 27, 1973 through October 1, 1973. A total of six blasts were recorded.

The purpose of the monitoring program was to measure the magnitude of ground vibrations caused by blasting operations at the proposed Makakilo Quarry, and to evaluate these vibrations in terms of possible structural damage to the Navy's water pumping facility located in the nearby vicinity.

ENVIRONMENTAL CONDITIONS

The proposed Makakilo Quarry is located on a lava ridge southwest of the U. S. Navy water pumping plant. The maximum difference between elevations of the shot points and the pump station appears to be on the order of 100 feet. The general locations of the blast area and the Navy's water pumping facility are shown on Plate I.

Pacific Concrete and Rock Company, Ltd.
October 11, 1973
- Page two -

Vibrations in the vicinity of the proposed quarry are transmitted through a similar rock formation as at the Palailai Quarry. This formation consists of layers of hard basalt rock with layers of clinkers and a thin layer of unconsolidated overburden.

BLASTING DATA

The blasting operations were performed by personnel from P.C.R. Descriptions of the blast locations and loading data for each of the monitored blasts were supplied to us by P.C.R. The descriptions are summarized below.

- 1) Shot holes were drilled to depths varying from 9 to 25 feet. Holes were $3\frac{1}{2}$ inches in diameter.
- 2) All blasts were detonated with electric blasting caps. Each blast was fired with three to four delays, depending on the size of the blast.
- 3) Carbonitrate-type explosives were used in all blasts.
- 4) The total amount of explosives used in the blasts ranged from 143.5 pounds to 1508.0 pounds. The maximum amount of explosives per delay was 377.0 pounds. The total amount of explosives used in Blast No. 1 was approximately one-half of the planned maximum total to be used during full-scale blasting operations. Blasting data of blasts which occurred during our monitoring program are presented on Table 1.

METHOD AND RESULTS OF SEISMIC MEASUREMENTS

METHOD

The ground vibrations were monitored using a Sprengnether VS-1100 engineering seismograph, which consists of a three-component (transverse, vertical, and longitudinal)

October 11, 1973

- Page three -

seismometer, and a signal conditioning recording unit. The vibrations were measured and recorded in terms of particle velocities in inches per second.

The seismograph traces are retained in our files, but they are available for inspection at your request.

The seismometer was located at the rear of the tunnel near the area of the water pumps. One of our engineers was present during the blasting operations to operate the seismograph unit. A representative from the U. S. Navy Public Works Commission was also present as the required observer of the monitoring operations.

RESULTS

A summary of the results of the maximum monitored ground vibrations in terms of particle velocity and acceleration is presented on Table 2, Seismic Data. The maximum vibration velocity recorded was 0.0784 inches per second, with a frequency of 4.45 Hertz (cycles per second), and amplitude of 0.0028 inches. This velocity is substantially lower than the generally accepted structural damage criteria* of 2.0 inches per second for maximum particle velocity.

During our monitoring program, an inspection was made on the tunnel lining. No recent cracks were visually detected. The entire structure appeared to be intact. No noticeable damage of the pumps had occurred during the blasting operations.

CONCLUSION

The velocities of the blast vibrations recorded by our seismograph were considerably lower than those generally accepted as the minimum velocity that can cause structural

* Langfors, V. & B. Kihlstrom, "The Modern Technique of Rock Blasting," John Wiley & Sons, 1963; and Wiss, John F., "Effects of Blastinf Vibrations on Buildings and People," Civil Engineering A.S.C.E., July 1968, 46-48.

DAMES & MOORE

Pacific Concrete and Rock Company, Ltd.
October 11, 1973
- Page four -

damage. It is our opinion that if future blasts are kept at the same magnitudes and distances as described in Pacific Concrete and Rock Company plan, blasting operations could be accomplished without causing damage to the Navy water pumping station.

- ooo -

It has been a pleasure being of service to you in this project. Should you have any questions concerning this letter, please contact us.

Yours very truly,

DAMES & MOORE



W. E. Estes

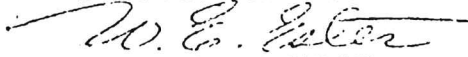
WEE:WC:gn

(Three copies submitted)

Attachments: Plate 1 - Plot Plan
Table 1 - Blasting Data
Table 2 - Seismic Data

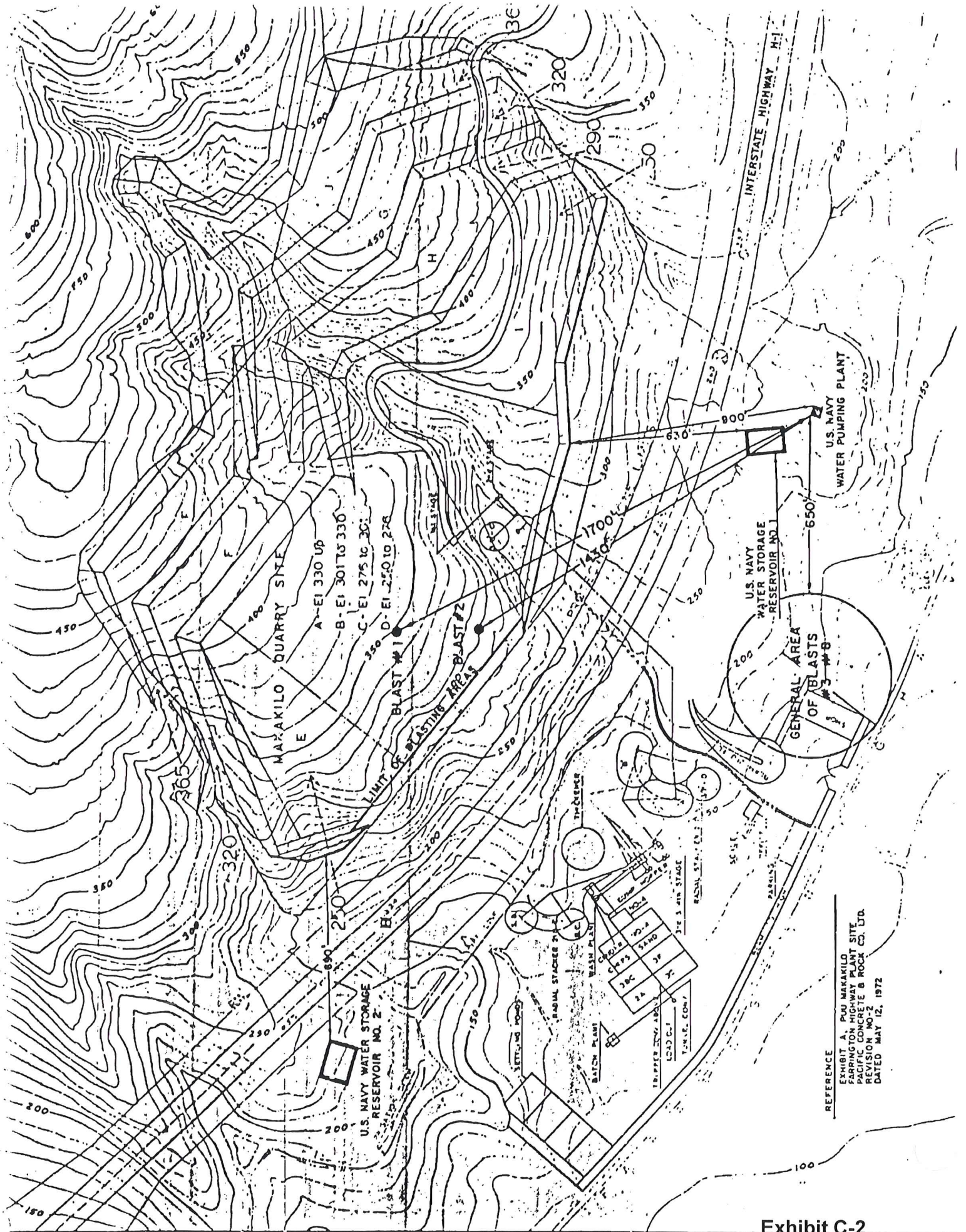


THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION



DAMES & MOORE

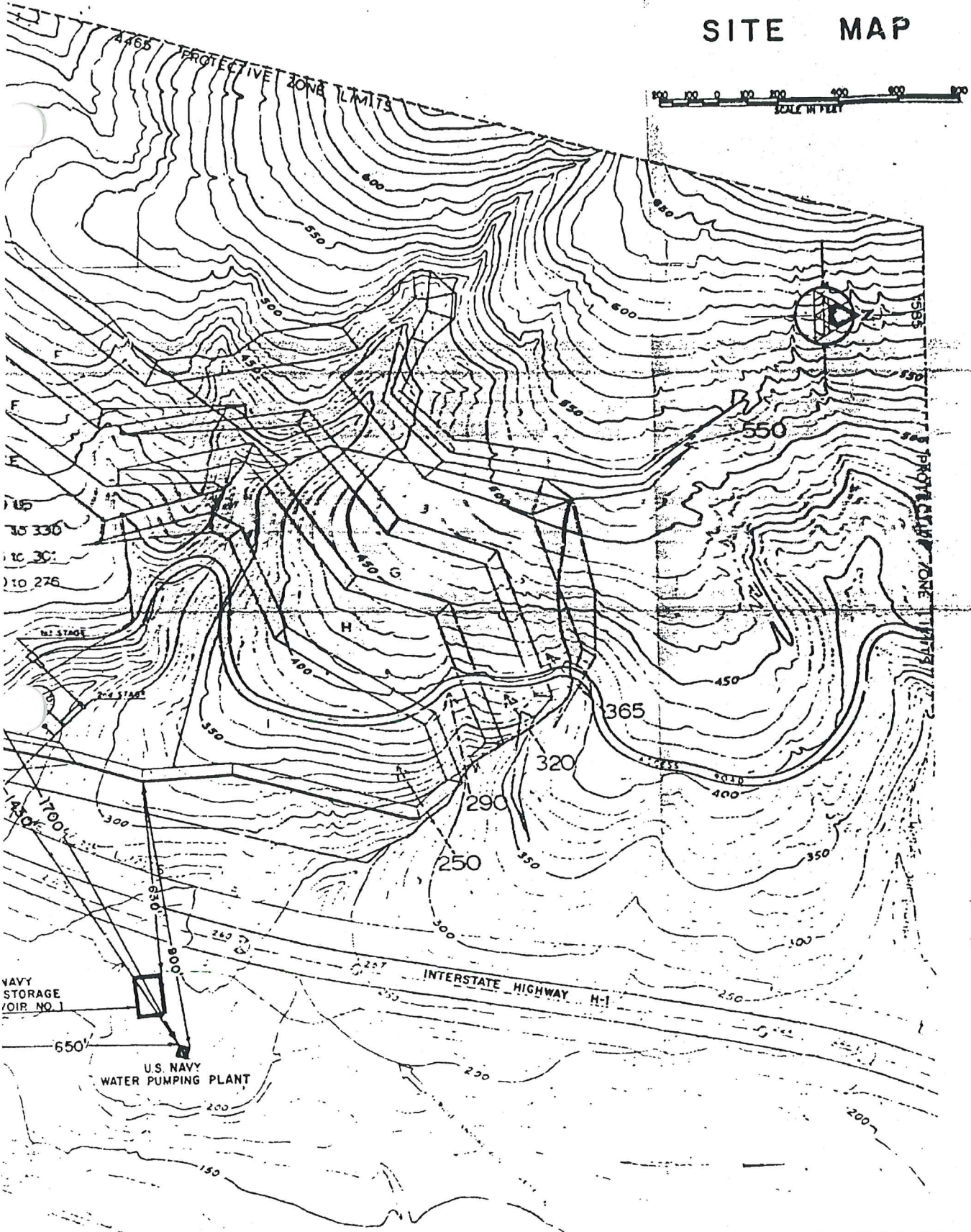
Task No. 7012



REFERENCE
 EXHIBIT A, POO MAKAKILO
 FARRINGTON HIGHWAY PLANT SITE
 PACIFIC CONCRETE & ROCK CO. LTD.
 REGION NO. 2
 DATED MAY 12, 1972

Exhibit C-2

SITE MAP



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PLATE

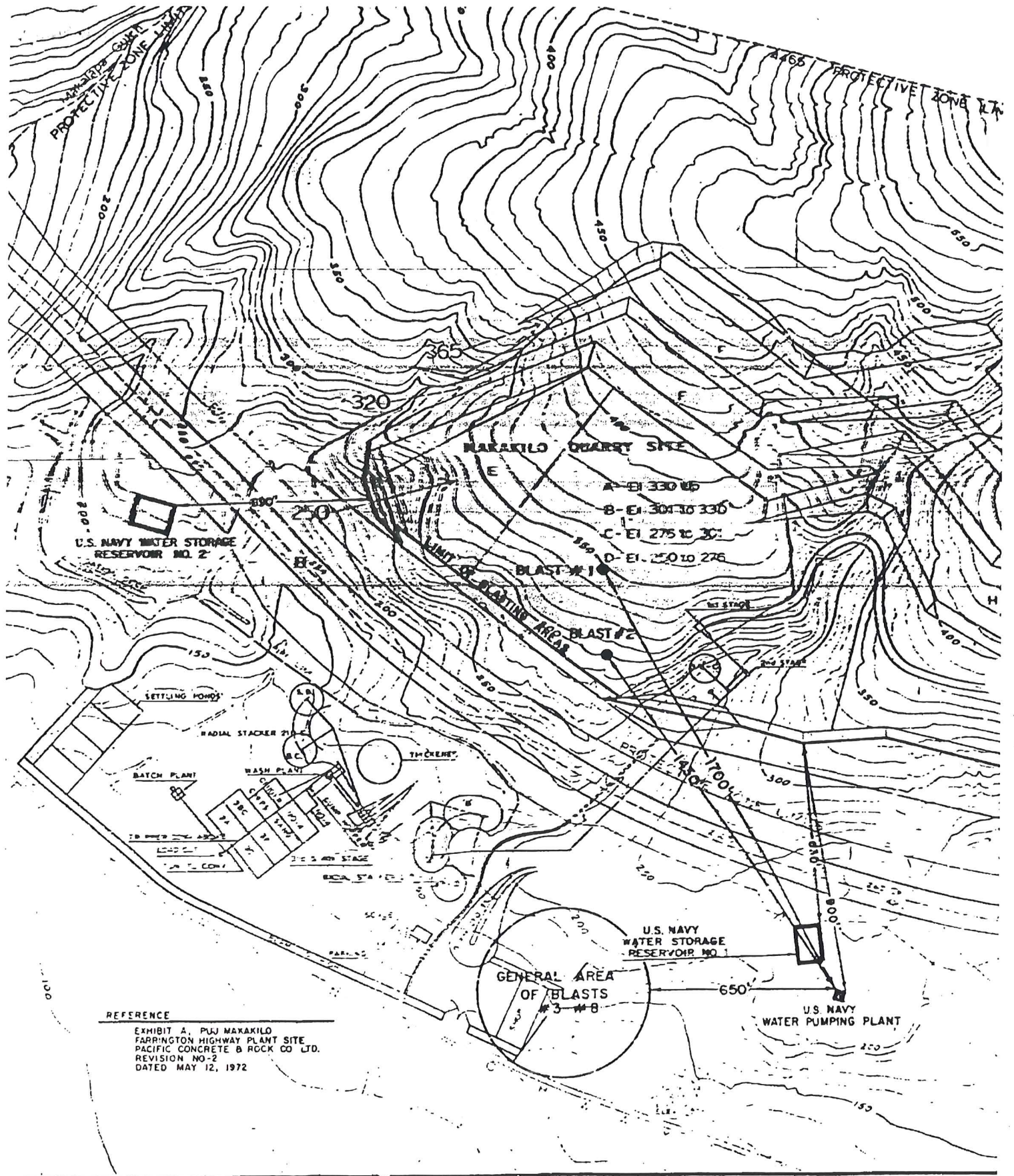


TABLE I - BLASTING DATA

BLAST NO.	DATE	TIME	NO. OF HOLES	AVER. DEPTH OF HOLES (FT.)	NO. OF DELAYS	CHARGE (POUNDS)			TOTAL CHARGE (POUNDS)	CHARGE (POUNDS), DELAY	REMARKS
						C.N.	1 1/2x8	2x8			
1	9-27-73	1315	29	25	4	1450	29	29	1508.0	377.0	1/2 of planned maximum
2	9-27-73	1445	21	12	3	150	21	8.5	179.5	59.8	
3	9-28-73	1107	32	9	3	150	12.5	0	162.5	54.2	
4	9-28-73	1115	32	9	3	150	12.5	0	162.5	54.2	
5	9-28-73	1345	32	9	3	150	12.5	0	162.5	54.2	
6	9-28-73	1425	31	9	3	150	12.5	0	162.5	54.2	
7	10-1-73	0915	42	12	3	125	19	0	144.0	48.0	
8	10-1-73	1015	41	12	3	125	18.5	0	143.5	47.8	

DAMES & MOORE

TABLE 2 - SEISMIC DATA

BLAST NO.	DATE	AMPLITUDE (INCHES)	FREQUENCY (HERTZ)	MAXIMUM VELOCITY (INCHES PER SECOND)	MAXIMUM ACCELERATION (INCHES PER SECOND ²)
1	9-27-73	0.00280	4.45	0.078	2.19
2	9-27-73	0.00034	6.10	0.013	0.50
3	9-28-73	0.00012	13.46	0.010	0.88
5	9-28-73	0.00021	11.21	0.015	1.04
6	9-23-73	0.00033	10.11	0.021	1.34
8	10-1-73	0.00016	10.00	0.010	0.63