MEMORANDUM

CITY/BOROUGH OF JUNEAU 155 South Seward Street, Juneau, Alaska 99801

DATE:

August 3, 2011

TO:

Planning Commission

FROM:

Eric Feldt, Planner II, CFM

Community Development Department

FILE NO.:

USE2011-0017

PROPOSAL:

Renew the 10-year Stablers Point Rock Quarry extraction permit.

GENERAL INFORMATION

Applicant:

Alan Steffert, Engineering Dept., City and Borough of Juneau

Property Owner:

City and Borough of Juneau

Property Address:

13010 Glacier Highway

Legal Description:

Fraction of Lot 1 USS 3810

Parcel Code Number:

4-B30-0-102-002-0

Site Size:

Less than 30 Acres

Zoning:

Rural Reserve (RR)

Utilities:

Public Water; No Sewer or Private Treatment System

Access:

Glacier Highway

Existing Land Use:

Rock Quarry

Surrounding Land Use:

North

- RR; Vacant City Land; Glacier Hwy

South

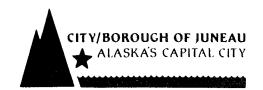
- D-3; Single-Family Dwelling; Glacier Hwy

East

- D-1; Single-Family Dwelling; Glacier Hwy

West

- RR; Vacant City Land; Glacier Hwy



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ATTACHMENTS

Attachment	A	Vicinity Map
Attachment	В	Project Narrative
Attachment	C	Final Quarry Condition
Attachment	D	January 2011 Quarry
		Conditions
Attachment	E	2021 Quarry Conditions
Attachment	F	USE2001-00022 Notice of
		Decision
Attachment	G	Noise Study
Attachment	H	Public Comment

PROJECT DESCRIPTION

The applicant requests a Conditional Use permit to renew the existing 10 year quarry permit at Stablers Point Rock Quarry that will expire August 14th, 2011 (Original Conditional Use permit # USE2001-00022). This quarry is located near Auke Bay, just east of the Alaska Marine Highway ferry terminal (Attachment A). This quarry will ultimately create a new cut into the hillside that will reroute Glacier Highway around an existing dangerous curve (Attachment C).

As explained in the applicant's narrative (Attachment B), the hours of operation would continue as existing: 8am – 4:30pm, Monday through Friday, and blasting from 10am-12pm and 1pm-3pm. Existing quarry conditions can be seen in Attachment D, and anticipated conditions for the next 10 years are shown in Attachment E. Due to the small size of anticipated projects, the applicant believes the new roadway will not likely be created in the next 10 years.

BACKGROUND

Stablers Point Rock Quarry was permitted in 2001 for a 10 year period (expiring August 14th, 2011) with the approval of Conditional Use permit # USE2001-00022. There were several conditions attached to this permit, which can be read under Attachment F. As stated earlier, the goal of the quarry is to create a new roadway; when that goal is reached, the city will convey the quarry as a new right-of-way to the State Department of Transportation/ Public Facilities (DOT).

The quarry is owned and managed by the City & Borough of Juneau (CBJ) but is operated entirely by private companies. Rock material is extracted by blasting, excavating, crushing, and finally trucked out to various sites in the borough. The quarry has been a valuable resource of large, dense rock for construction. Other quarries and gravel pits in the borough provide smaller, refined rock material used for different construction capacities. Having this diverse rock resource is critical for meeting the needs of various construction projects.

Since 2001 the limits and operations of the quarry have expanded to meet unusually large

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construction needs, such as the new Thunder Mountain High School and the Egan Drive by-pass. During those times, Conditional Use permits were subsequently required and approved by the Commission. Currently, the hours and days of operation are back to the original 2001 permit: 8am – 4:30pm Monday through Friday, and blasting from 10am-noon and 1pm-3pm, Monday through Friday.

The generated noise from the quarry has been the strongest concern of the neighborhood and those living across Auke Bay along Fritz Cove Road. In the original permit a Noise Management Plan was submitted, along with other noise related plans such as a Blasting and Sound Control plan. Several noise mitigating methods were employed as conditions of the permit. These conditions can be read in Attachment F. These will continue with the subject permit. A new noise study was completed for the subject permit, and can be read under Attachment G.

ANALYSIS

The applicant is seeking to renew the existing 10-year extraction permit. This permit has been reviewed and processed according to Title 49 section 49.65.210(a) 'Extraction Permit,' as stated below in italics.

49.65.200 Extraction permit required.

(a) The use of property for the excavation, removal or other extraction of stone, sand, gravel, clay or other natural deposits and formations, including the processing of the materials, may be authorized in any district only under a conditional use permit issued by the Commission under the procedures set forth in chapter 49.15, article III, as modified by this article. (Emphasis Added)

As required with every Sand and Gravel permit, stated below in italics, the applicant shall provide the following description list for Planning Commission review.

49.65.210 Contents of application.

Each person who requires a permit under this article [Article II Sand & Gravel] shall file an application with the department. The application shall contain a plan for the excavation operation, storage, on-site processing if permitted in the district, and site restoration. The plan shall include (see items 1-7 below):

Attachment B contains a detailed letter from the applicant responding to all of the criteria listed below. Along with that document and others submitted in the application, staff has responded to each of the following criteria.

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(1) A graphic and legal description of the property;

The location of the Stablers Point quarry and the proposed areas of expansion are shown on Attachment A. The quarry is approximately less than 30 acres within a 310 acre parcel (Lot 1, USS 3810) near 13 mile of Glacier Highway.

(2) A topographic map showing the existing topography, vegetation, drainage features, ground water level, structures, significant natural and artificial conditions of the land, on-site and off-site geophysical hazards which may affect or be affected by the proposed operation, proposed structures, roads, stockpiling and operation;

Attachment D shows an overhead view of the quarry dated January 1st, 2011. The contours depict the cut benches along the walls of the quarry. The limits of the tree line surrounding the quarry are also shown. The drainage will continue to settle in existing areas within the quarry and flow toward the Glacier Highway.

(3) A topographic map and a typical cross section showing the proposed finished contour on the land, vegetation, drainage features, limits of overburden clearing, structures, and significant natural and artificial conditions of the property which will exist upon completion of the site restoration plan;

Attachment E illustrates what the quarry is anticipated to look like at the end of the next 10-year operating period (2021). Attachment F illustrates what the quarry is expected to look like at its completion stage.

(4) Topographic mapping required in subsections (2) and (3) of this section for areas having a slope of less than five percent shall show spot elevations at all breaks in grade, drainage channels or swales and at selected points not more than 100 feet apart in all directions. For areas having a slope of greater than five percent, contours shall be shown at an interval of not more than five feet where the ground slope is regular: however, contour intervals of not more than two feet may be required where necessary to adequately show irregular land features or drainage details;

The walls of the quarry will continue to be benched down toward the floor. Each bench will be approximately 30 feet in height and depth. Attachments D and E depict present and future quarry conditions.

(5) The plan shall include a map showing ingress and egress points for trucks and other equipment;

An existing paved driveway is the only point of entry/ exit for the quarry. A security gate is at the entrance of this driveway by Glacier Highway. This driveway will continue to be the only point of entry/ exit. This is shown in the existing and proposed quarry conditions illustrations.

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(6) The plan shall include a map showing all buildings and structures to be located on the site; and

The applicant states that a truck scale was installed on the quarry floor in 2007, along with a portable shack associated with the scale. Attachment D shows the shack on the southeast corner of the quarry. These will continue to be used. A port-o-john is brought to the quarry during every construction season. Additional buildings will not be brought into or constructed on the quarry with this permit.

(7) A narrative statement describing the operation, on-site processing, stockpiling, and site restoration shall be included showing:

The applicant describes the operations of the quarry as follows:

- "A specific mining area is made available to contractors needing rock for City projects. Contractors are required to submit a mining plan for approval prior to mining. The contractor must operate under conditions imposed by the quarry usage plan. The mining plan and usage plan address the contractor's responsibilities while operating in the quarry.
- When space is available, mining areas may be allocated to contractor's needing rock for other projects (e.g. State, Federal, and private).
- All actual mining work is done by contractors, not by CBJ.
- CBJ charges the contractor a management fee for each ton of rock mined. The fees are used to pay for CBJ material sources, operational expenses and to fund past and future source development and reclamation expenses."

(A) A site drainage plan;

The applicant indicates that stormwater from the quarry is regulated by the Alaska Department of Environmental Conservation (DEC) Multi Sector General Permit for Industrial Activities, which requires the quarry to comply with a Storm Water Pollution Prevention Plan (SWPPP).

Water run-off from the quarry flows toward a settling pond in the southeast corner of the quarry, then toward a vegetated area, and finally toward an existing drainage ditch along Glacier Highway. During extreme rains or frozen ground conditions, drainage will be directed through a culvert under the quarry access road toward Auke Nu Creek. This culvert is a SWPPP designated stormwater outfall. The existing drainage route and elements will continue to be used.

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(B) A method of securing the area, including installation of gates at access points, posting, and fencing;

There are locking gates at the entrance of the driveway that are secured during the end of daily operations. These gates will continue to be used.

(C) Methods to be used to minimize noise pollution and visual blight;

The detailed noise study completed for the 2001 Conditional Use permit is now outdated due to quarry expansions and a more recent one has been completed and submitted with this memorandum (Attachment G). This study concluded that the recorded noise levels measured at various locations around the quarry are low and additional noise mitigating measures are not warranted. Therefore, the existing noise mitigating elements will be continued to be used. These elements are listed below.

- Restrict the use of exhaust brakes on trucks entering or leaving the quarry, unless required for safety reasons.
- A constructed earthen berm at "open" east end of quarry services as a noise barrier.
- Maintain a rock wall around south and western perimeter. Height of the wall is generally one bench height (30 ft) or taller above the lower quarry floor levels.
- Minimize the clearing of trees and other vegetation from around the perimeter of the quarry and encourage the regeneration of vegetation in order to diffuse noise and soften sound reflective surfaces.
- Limit crushing activities to the lower quarry levels, locating crushers behind stockpiled material if at all possible.

Visual blight of the quarry and its equipment will be minimized through retaining trees along the perimeter. At certain points along Fritz Cove Road and near the University of Alaska Southeast (UAS), the quarry benched walls will be visible but are not expected to be visually bothersome.

The outer southwest corner wall of the quarry will be lowered in height in the next 10 years to minimize the creation of steep, precarious cliffs and prevent rock fall. This wall will be benched down in the interior of the quarry floor for stabilization, and will be 30-60 feet lower than the top of the wall. As this outer wall lowers, additional noise is expected to be generated. The applicant states that this area of the quarry will likely be mined last as to preserve noise barriers. Further, this part of the quarry consists of steep cliffs that must be evaluated prior to mining for safety precautions.

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(D) The proposed hours and days of operation during the year;

The hours of operation would continue as existing: 8am – 4:30pm, Monday through Friday; blasting from 10am-12pm and 1pm-3pm, Monday through Friday. The applicant states, "If sufficient need could be demonstrated, quarry management would support the introduction [of] Saturday hauling operations from the quarry and/ or extended hours of operation during the week days. The applicant believes that limited quarry operations involving loading and hauling only could be allowed on Saturdays with little additional impact on the neighborhood."

(E) The estimated amount and general type of material present and to be removed from the site;

The applicant estimates 2.3 million cubic yards of rock for extraction is available under the current quarry development plan. This rock is solid and large, and therefore, requires the use of explosives for extraction and crushing for product size.

(F) The results of test holes which show the water table level, if any, and the general type and location of materials to be removed;

The applicant states that there is no visible water table at the elevation of Glacier Highway, where the quarry floor will eventually be mined down to.

(G) The date by which it is anticipated the extraction and processing operation will be completed;

The applicant indicates that the rate of extraction will influence the quarry completion date. This is the date where the quarry floor will be suitable for the creation of a new roadbed, and will look like the figure shown in Attachment C. Large projects typically remove the largest quantity from Stablers Point Rock Quarry. Several other sand and gravel operations in town provide specific rock and gravel quality and size that is used more for small projects in town. Having diverse rock resource in the borough lessens the demand for gravel pits and extends their life.

(H) A schedule for completion of necessary site restoration work;

The restoration work is dependant on the completion of the quarry, which as stated above, will be driven by the number of large projects. The applicant states that the upper benches and walls along the northwest side will be benched to their final finishes and then planted with alders in the following years.

The restoration plan requires establishing stable benches with clean rock finishes at the perimeter of the quarry. These benches are depicted in Attachments C & E.

(I) Operating procedures for control of airborne particulates and other pollutant emissions from the site and equipment used at the site that may affect areas beyond the site boundaries;

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Dust is always produced at a quarry whenever extracting or transporting rock, especially drilling, blasting, and crushing. Juneau's rainy climate aids in dust control, but during dry periods or high dust operations of the quarry, additional measures are used. City water is piped up to the quarry for use of spray bars on crushers and screens. Drills are required to be equipped with devices collecting and separating airborne particulates. Regular cleaning of the access drive minimizes dust accumulation from trucks. Those methods to control dust will be continued.

(J) The identification of any geophysical hazards which may affect or be affected by the proposed operation. A statement of the possible impact of the hazard on the operation and of the operation on the hazard including methods of reducing the impact shall be included;

The applicant states that the west end of the quarry lies below a large cliff with overhanging sections that loom over Glacier Highway. Some large boulders are present on these sections and pose a safety issue. Further geotechnical evaluations will be initiated prior to mining in this area, as stated by the applicant. To ensure this evaluation is complete, staff recommends it as a conditioned on this permit.

(K) The date of establishment of the operation and history of adjacent land development; and

The applicant lists the quarry operation history under subsection 7(K) of Attachment B, starting with the mining of the outside wall of the cliff face in 1997.

Lands to the north and west of the site are heavily forested. Most of the surrounding properties are zoned for single- and two-family residents. The Alaska Marine Highway ferry terminal and other loading facilities are located southwest of the quarry. Single- and two-family residences are located to the east. There is one residence immediately south of the site across from Glacier Highway. Auke Bay is south of that residence. There are many residences across Auke Bay along Fritz Cove Road.

(L) Such additional relevant information as the Commission or Department may request.

Shown in Attachment D are large rings around mapped eagles' nests representing a 330-foot no development setback, as required in the Land Use Code. Since the limits of the quarry are within this setback, several variances were needed to permit quarry operations. Approved Variance permits are No's. VAR96-52, VAR2000-37, VAR2001-17, & VAR2008-6. These variances did not expire. Quarry restrictions and observational methods to minimize disturbance to the eagles were required with these variances and are still used. These restrictions will continue throughout the life of the quarry. After several years of observation, the eagles continue to use the nests and seem unaffected by quarry operations. Since the construction of the quarry is not expected to be closer to the eagles' nests as previously approved in past variances, staff finds that new variances for the subject permit will not be required.

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49.65.230 Commission action on Application.

The Commission may grant the permit but shall first consider each of the following areas (as listed below) and may impose restrictions as may be necessary to protect the public health, safety and welfare. Staff indicates that the following areas listed below were addressed in the 2001 Conditional Use permit memorandum (USE2001-00022) and listed as permit conditions under Attachment F. Some of these conditions are still relevant and, where still warranted, staff continues to recommend them as permit conditions for the current permit.

(1) The hours, days, and times of year of operation;

The quarry currently operates from 8am- 4:30pm, Monday through Friday, year-round, except for State holidays, and blasts between 10am-12pm and 1pm-3pm. These hours were established in the original permit. Under the subject permit, these hours of operation will remain the same due to growing concern of noise during previous longer hours and days of operation. Staff recommends the hours of operation and blasting be a condition of this permit. These are listed as conditions 3 & 4 under Recommendation.

(2) Screening, whether natural or artificial, to reduce or eliminate adverse visual, audible or other impacts of the operation;

The visual blight of the quarry has not been as much of a growing concern as that of the perceived noise generation. A recent noise study (Attachment G) was completed and concluded that additional noise mitigating measures were not recommended since the noise levels documented during the study were below the noise regulation of 65 dBA.

The noticeable, yet low noise levels have been of great concern to residences along Fritz Cove Road. This has influenced the hours of operation, which will remain unchanged. Staff recommends several conditions to help retain this low noise level. See conditions 19, 22 & 24 under Recommendation.

(3) Measures to protect the public from the dangers of the operation or site, to prevent casual or easy access to the area, or to prevent the operation or area from being an unprotected attractive nuisance;

A security gate will continue to be used at the entrance of the driveway along Glacier Highway, as listed as a condition of this permit. Staff indicates that there are several protective measures currently being exercised to protect the public: compliant blasting operations, as referenced in the original 2001 'Blasting Controls' section of the 'Geologic Surface Survey;' requiring public notice and road closure during blasting along Glacier Highway; limiting sizes of blasting; and site security. These are also conditions of this permit listed under Recommendation (See Conditions 2, 6 - 8, 19, 21).

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(4) Final and working slope ratios of the face of any extraction area to the extent necessary to protect abutting public and private property, and to protect the future beneficial uses of the property as described in the applicant's plan for development and restoration;

The final and working slopes of the face of the quarry are shown in Attachments C - E. Measures to protect public and private properties are addressed above in subsections 7 (B & C) and 49.65.230 (3) of this memorandum. Staff recommends a condition ensuring that the slopes of the quarry walls are secure and do not pose a threat to the public. See Conditions 11 and 21 under Recommendation.

(5) Measures to protect private and public property adjoining the operation and to guarantee orderly and safe traffic circulation both on the public streets and within the permit application area;

This criterion has been addressed in this memorandum under subsections 5, 7(B, C & J), and 49.65.230 (1 & 2) of this memorandum. Staff recommends several conditions ensuring that the quarry operation does not negatively affect adjoining property and existing traffic environment. See Conditions 1, 8, 12-15 under Recommendation.

(6) Measures which will ensure adequate drainage or collection and storage of surface waters to protect surrounding property, eliminate dangers to the public, or to protect the future beneficial use of the property as described in the applicant's plan for development and restoration;

This criterion has been addressed above under subsection 7(A). Staff recommends a condition ensuring adequate management of the drainage and minimizing its effect to adjacent property. See Condition 10 under Recommendation.

(7) Measures to protect the water level and water quality;

This criterion has been addressed above under subsections 7(F). The water level has not been observed at the Glacier Highway road elevation, which is the anticipated future quarry floor elevation.

(8) Measures to minimize or eliminate airborne particulates, visual blight, noise and other adverse environmental effects;

This criterion has been addressed above under subsections 7(C, I, J, & L), and 49.65.230 (2).

(9) Restoration measures and schedule;

The restoration measures and schedule are addressed above under subsections 7 (E, G, & H).

(10) Other measures designed to protect the public health, safety and welfare, including preservation of neighboring property; and

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Measures to protect the public health, safety, and welfare, including preserving neighborhood property, have been addressed in this memorandum. There are several recommended conditions pertaining to this criterion.

(11) Present development and past history of the neighboring property.

Present and past quarry development is discussed under subsection 7 and attachment 'B'.

49.65.235 - Mandatory conditions of permit.

Unless specifically waived by the Commission, the requirements of this article shall be a condition of all permits issued. The Commission may not waive or modify any of the following requirements except upon a finding that the requirement would serve no useful purpose. Such finding must be supported by substantial evidence in the record of the hearing before the Commission:

(1) A strip of land at the existing topographic level, and not less than 15 feet in width, shall be retained at the periphery of the site wherever the site abuts a public way. This periphery strip shall not be altered except as authorized for access points. This section does not alter the applicant's duty to maintain subjacent support.

A strip of land south of the quarry, partially owned by DOT/ PF & CBJ, will continue to separate the future by-pass highway from Glacier Highway (Attachments D & E). The final two access points will be the only areas where the buffer will be penetrated.

(2) If the bank of any extraction area within the permit area is above the high water line or water table, it shall be left upon termination of associated extraction operations with a slope no greater than the angle of repose for unconsolidated material of the kind composing it, or such other angle as the Commission may prescribe. If extraction operations cause ponding or retained water in the excavated area, the slope of the submerged working face shall not exceed a slope of 3:1 from the edge of the usual water line to a water depth of seven feet. This slope ratio may not be exceeded during extraction operations unless casual or easy access to the site is prevented by a fence, natural barriers, or both.

The water table and high water line are both below the bank of extraction. The slope of the quarry walls will be stepped down toward the quarry floor with benches establishing an area of repose. Temporary ponding occurs with drainage of water run-off that runs to an approved drainage point. Submerged working faces of the quarry are not expected to be created.

Conformity With Adopted Plans

The 2008 Comprehensive Plan designates this area as 'Resource Development', which is defined as "Land to be managed primarily to identify and conserve natural resources until specific lands are identified and developed. Such specific uses may include, where appropriate, resource extraction and development, recreational and visitor-oriented facilities, and residential uses."

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The most germane policy of the Comprehensive Plan is stated below.

POLICY 5.9 IT IS THE POLICY OF THE CBJ TO SUPPORT THE EXTRACTION AND PROCESSING OF MINERAL RESOURCES IN AN ENVIRONMENTALLY-SOUND MANNER, GIVING PROPER RECOGNITION TO THE UNIQUE VALUES OF THIS COMMUNITY.

The recommended conditions will minimize negative affects to adjacent property value and the environment while preserving adequate operations of the quarry. Therefore, staff finds that the project is consistent with the 2008 Comprehensive Plan.

Title 49, Land Use Code

In general, the purpose of the Land Use Code is to ensure development is:

- In accord with the values of the community;
- Achieving goals and policies with adopted plans;
- An appropriate use of economically valuable land;
- Appropriate in type, design, location, and
- Served by adequate utilities.

The Stablers Point Rock Quarry provides a valuable resource that facilitates the development of small and large projects throughout the borough, while minimizing affects to adjacent property owners and the public. With the recommended conditions, the operation will continue to meet the intent of the Land Use Code.

49.70.900-49.70.1097 COASTAL DEVELOPMENT, HABITAT, AND WETLANDS

As stated earlier, there are three mapped eagles' nests near the quarry. Several variances were approved in the past for quarry activity within the eagles' nest setbacks that have not expired. Protective measures to minimize affects to the eagles will continue through the next 10 years. There are no mapped wetlands that will be affected by this permit.

PUBLIC COMMENTS

The applicant held a neighborhood meeting on May 18th, 2011 to discuss the future of the quarry. Several property owners and interested members of the public attended. Their comments can be read under Attachment H.

FINDINGS

CBJ §49.15.330 (e)(1), Review of Director's Determinations, states that the Planning Commission shall review the Director's report to consider:

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- 1. Whether the application is complete;
- 2. Whether the proposed use is appropriate according to the Table of Permissible Uses; and,
- 3. Whether the development as proposed will comply with the other requirements of this chapter.

The Commission shall adopt the Director's determination on the three items above unless it finds, by a preponderance of the evidence, that the Director's determination was in error, and states its reasoning for each finding with particularity.

CBJ §49.15.330 (f), Commission Determinations, states that even if the Commission adopts the Director's determination, it may nonetheless deny or condition the permit if it concludes, based upon its own independent review of the information submitted at the public hearing, that the development will more probably than not:

- 1. Materially endanger the public health or safety;
- 2. Substantially decrease the value of or be out of harmony with property in the neighboring area; or,
- 3. Not be in general conformity with the comprehensive plan, thoroughfare plan, or other officially adopted plans.

Per CBJ §49.15.330 (e) & (f), Review of Director's & Commission's Determinations, the Director makes the following findings on the proposed development:

1. Is the application for the requested conditional use permit complete?

Yes. We find the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. Is the proposed use appropriate according to the Table of Permissible Uses?

Yes. The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ §49.25.300, Section 14.500 for the Rural Reserve zoning district.

3. Will the proposed development comply with the other requirements of this chapter?

Yes. The proposed development complies with the other requirements of this chapter. Public notice of this project was provided in the July 29th and August 5th issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to all property owners within 500 feet of the subject parcel. Moreover, a Public Notice Sign was posted on the subject parcel, visible from the public Right of Way.

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4. Will the proposed development materially endanger the public health or safety?

No. With the recommended conditions, such as noise mitigating measures, blasting limits and other mining methods, the quarry will continue to operate in a way as to not endanger the public health or safety.

5. Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?

No. Since 2001 quarry activity has fluctuated with construction intensity and extended the hours and days of operation. This brought new noise levels to the neighborhood during weekends and later weekday afternoons. Noise has always been the greatest concern to the neighborhood and to those living across Auke Bay. During the May neighborhood meeting and past Planning Commission meetings, the addition of new work days and later hours beyond those existing were generally not favored. Increased noise from loading trucks was specifically identified as bothersome. Several permit conditions have been and continue to be recommended to minimize noise levels. These can be read under 'Recommendation'. The attached noise study concluded that insignificant noise readings were recorded throughout the neighborhood and, therefore, no additional noise mitigating were recommended.

Ten years later, the property owners seem accepting of the noise occurring within the existing hours of operation, and therefore, the applicant is not purposing to change them.

6. Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?

Yes. Conformance with the 2008 Comprehensive Plan and Title 49, Land Use Code has been addressed earlier in this memorandum.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

7. Will the proposed development comply with the Juneau Coastal Management Program?

Yes. With staff's recommended conditions, the quarry operation will be consistent with the Juneau Coastal Management Program.

RECOMMENDATION

It is recommended that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use permit. The permit would allow the development of a 10-year extraction permit that is subject to the following conditions:

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- 1. All vehicle loads shall be contained. Vehicles hauling from the site shall be operated with tailgates, covers or other similarly effective methods.
- 2. Public notification warning signs shall be erected a minimum of 24 hrs prior to blasting. Written notification shall be given to Juneau Flight Services, Juneau Police Department and Capital City Fire / Rescue a minimum of 24 hrs prior to blasting.
- 3. The hours, days and dates of operation shall be 8am 4:30pm, Monday through Friday, all year except State holidays.
- 4. Blasting operation shall be scheduled to occur between 10am-12pm and 1pm-3pm, Monday through Friday.
- 5. This quarry permit shall expire 10-years after the date of approval.
- 6. Each quarry operator shall submit an individual mining plan that is in conformance with this Conditional Use permit and is approved by the quarry manager prior to performing any work in the quarry. Each mining plan shall be prepared by a civil engineer or other authorized professional.
- 7. The operator is required to comply with the requirements of CBJ Standard Specifications 02090 Blasting Controls. A quarry operator shall submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast.
- 8. Quarry operators shall comply with the existing DOT/ PF approved Stablers Traffic Control Plan(s) for blasting operations, quarry access, and work within the DOT/ PF ROW.
- 9. Explosives shall not be stored on site, except for that which is immediately necessary for the next blast.
- 10. The applicant shall comply with DEC regulations governing stormwater discharges from the quarry site, with particular attention paid to protecting Auke Nu Creek
- 11. The applicant shall (or shall cause to) reclaim the quarry site with finished faces and established benches, and remove loose rock during the period between projects, even if the entire quantity of rock has not been removed.
- 12. The applicant shall (or cause to) control dust caused by excavation, truck hauling, rock crushing, or other aspects of the operation.
- 13. The applicant shall (or cause to) repair any damage to Glacier Highway as a result of the quarry operation. If there is visible damage to the roadway due to hauling or mining

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operations, the roadway shall be repaired in cooperation with DOT/PF.

- 14. The applicant shall require the posting of a bond (or equivalent if project based) from all quarry operators to ensure spilled or tracked material are removed from public roads. The applicant shall (or cause to) remove all spilled materials immediately from public roadway and ensure that mud and debris tracked onto roads be cleaned daily with the City having the ability to allow less frequency on a case by case basis as warranted. DOT/ PF reserves the right to request sweeping at any time it sees a problem or complaint.
- 15. The applicant shall ensure that lighting (if any) does not glare onto adjacent roadways.
- 16. The applicant shall (or cause to) operate the quarry according to the application proposal, including attachments and drawings, except that all conditions contained herein shall take precedence.
- 17. The applicant shall ensure that the rock extraction is consistent with the recommendations of the US Fish & Wildlife Service for the protection of nesting eagles according to the past approved variances (VAR96-52, VAR2000-37, VAR2001-17, & VAR2008-6).
- 18. The applicant shall maintain a lockable security gate at the quarry entrance.
- 19. The applicant shall (or cause to) retain a natural buffer at the western end of the quarry similar to that at the eastern end for a visual and noise barrier. This buffer may be pierced to create the new western entrance roadway (Attachment C). Additionally, and when feasible, the buffer shall be retained during all quarry operations throughout the site for noise and visual buffering.
- 20. Prior to extracting the southwestern cliff face of the quarry, a qualified expert in geophysical hazard shall evaluate the site and recommend guidelines for its development. Further, these guidelines shall be made part of any approved mining plans for these areas and written notification given to all operators.
- 21. The recommended noise levels (excluding blasting) as measured at the nearest property lines shall not exceed 65 dBA.
- 22. Rock crushers shall be operated on the lower quarry levels. Stockpiles shall be located in a way to provide additional noise screening barriers whenever possible.
- 23. The applicant shall have all operators of the quarry conduct their activities in accordance with all requirements of the noise management plan, blasting and noise controls, temporary environmental controls.
- 24. The site clearing shall be consistent with needs to retain sound and visual barriers for the

Planning Commission File No.: USE2011 0017 August 3, 2011 Page 17 of 17

quarry operation. Prior to removal of substantial vegetation, the clearing limits shall be flagged and reviewed for approval by the Community Development Department.

25. Individual blasts shall be limited to a maximum of 6,000 cubic yards.

Advisory Condition

- 26. The pull out area adjacent to the quarry entrance drive near Glacier Highway is to be used for equipment transfer only. There shall not be temporary or long term parking on the pull out area. Transfer operations shall occur outside of the roadway clear zone. Access into the pull out area shall be limited to right in and right out turns.
- 27. A strip of land at the existing topographic level not less than 15 feet in width shall be retained at the periphery of the site wherever the site abuts a public way. This periphery strip shall not be altered except as authorized for access points. This section does not alter the applicant's duty to maintain subjacent support.
- 28. If the bank of any extraction area within the permit area is above the high water line or water table, it shall be left upon termination of associated extraction operations with a slope no greater than the angle of repose for unconsolidated material of the kind composing it, or such other angle as the Commission may prescribe. If extraction operations cause ponding or retained water in the excavated area, the slope of the submerged working face shall not exceed a slope of 3:1 from the edge of the usual water line to a water depth of seven feet. This slope ratio may not be exceeded during extraction operations unless casual or easy access to the site is prevented by a fence, natural barriers, or both.

ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

	Project Number	Project Name (15	5 characters)	and the second s	Case Number		Date Received
					usego	40017	7/7/11
	TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED						
	Accessory Apartment*** (AAP) Driveway in Right-of-Way (ADW)						
	Use Listed in §49.25.300 (USE) (Table of Permissible Uses)						
	Please list the Table of Permissible Uses Category: 14.500 Sund & Grave Coerd						
	***An Accessory Apartment Application will also be required.					V	
	DESCRIBE THE PROJECT FOR WHICH AN ALLOWABLE OR CONDITIONAL USE APPROVAL IS NEEDED. CONTINUED OPERATION OF AN EXISTING PERMITTED						
	Pec	k Quarr	-Y AT STABL	er point			
-							
CAN	IS THIS A MODIFICA	ATION OF AN	EXISTING APPRO	VAL?	NO YES	- Case #	12008-00007
HE APPL	CURRENT USE OF	LAND OR BUI	LDING(S): 12	DCK QUAZA	27		
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3	PROPOSED USE O	F LAND OR BU	JILDING(S):	SAUE			
Į.							
5							
Ц П	UTILITIES PROPOSED: WATER: Public On Site SEWER: Public On Site						
=	SITE AND BUILDING SPECIFICS: C 22 ACRES TO BE DEVELOPED Total Area of Lot square feet						
	Total Area of Bro	pposed Structure(s	· AAA	uare feet	Silucidie(s)		square feet
)	and root			
	EXTERNAL LIGHTIN Existing to remain ド	. \square	Yes – Provide fixt	ure information, cutof	f sheets, and lo	cation of ligh	tina fixtures
	Proposed Proposed	No				_	
	Proposed No Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures PROJECT NARRATIVE AND SUBMITTAL CHECKLIST:						
	Site Plan Floor Plan of proposed buildings NA Existing and proposed parking areas (including dimensions) and proposed traffic circulation						
	Elevation view of existing and proposed buildings NA Existing Physical Features of the site (drainage, habitat, hazard areas, etc.)						
	Proposed Vegetative Cover						
For more information regarding the permitting process and the submittals ALLOWABLE/CONDITIONAL USE FEES Fees Check No. Receipt						Receipt	Date
	required for a comple	ete application,	Application Fees Admin, of Guarantee	5 1 1 2 -			
	please see the reverse	siue.	Adjustment	\$	<u> </u>		
İ	If you need any assist	ance filling out	Pub. Not. Sign Fee	<u>50.00</u>			
	this form, please contact the Permit Pub. Not. Sign Deposit \$ 100,00						
	Center at 586-0770.		Total Fee	<u>s 1,750.00</u>	pard by	DAC	7/44

NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM

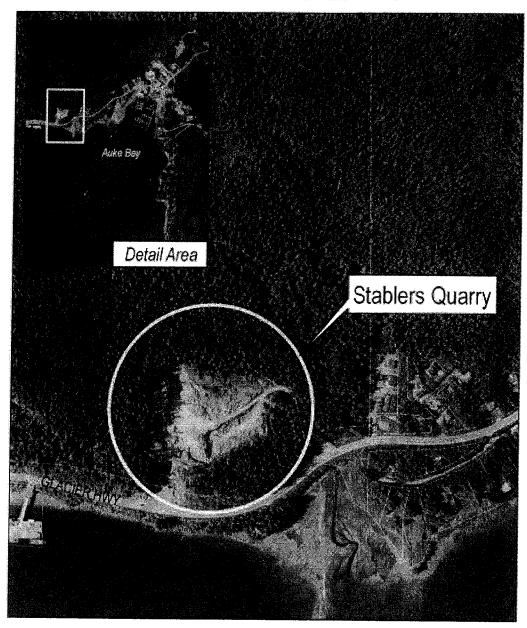
ACCOUNTING CODE FOR FRES

DEVELOPMENT PERMIT APPLICATION

Project No	umber	CITY and BOROL	JGH of JUNEAU	ate Received:		
Project Name (City Staff to Assign Name)						
	Project Description REPERMIT EXISTING ROCK QUARRY AT STABLER POINT.					
FORMATION	PROPERTY LOCATION Street Address MP 13 VETERANS MEMORIAL ITWT Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) USS 3810 LOT 1.					
W Y		B300 1020020				
NFOF	Property Owner's Name	CS. ADD ST YOUR	Contact Person: Alan Steller Home Phone: 729-474			
	E-mail Address Act & Ci	SEWARD ST. JUNE JUNEW, OK. US	Other Contact Pho	Other Contact Phone Number(s):		
APPLICANT	LANDOWNER/ LESSEE CONSENT ****Required for Planning Permits, not needed on Building/ Engineering Permits*** I am (we are) the owner(s)or lessee(s) of the property subject to this application and I (we) consent as follows: A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission. B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application. X. Landowner/Lessee Signature Landowner/Lessee Signature ***Required for Planning Permits, not needed on Building/ Engineering Permits**** ***Required for Planning Permits, not needed on Building/ Engineering Permits**** ***Landowner/Lessee Signature** ***La					
_	Landowner/Lessee Signature Date NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.					
PROJECT		the same as OWNER, write "SAME" a	Contact Person:	Work Phone:		
PR(Mailing Address E-mail Address		Home Phone: Other Contact Pho	Home Phone: Fax Number: Other Contact Phone Number(s):		
	XApplicant's Signature	OFFICE USE ONLY	BELOW THIS LINE	7-7-11 Date of Application HIS LINE		
		01,102 002 01121				

		OFFICE USE ONLY	BELOW 1	THIS LINE				
	V	Permit Type	***SIGN	Date Received	Application Number(s)			
		Building/Grading Permit						
		City/State Project Review and City Land Action						
APPROVALS		Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)						
		Mining Case (Small, Large, Rural, Extraction, Exploration)						
		Sign Approval (If more than one, fill in all applicable permit #'s)						
2		Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)						
<u>Р</u>	×	Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)		7/7/4	USC 20110017			
₹		Variance Case (De Minimis and all other Variance case types)						
STAFF		Wetlands Permits						
		Zone Change Application						
		Other (Describe)						
		***Public Notice Sign Form filled out and in the file. Comments: Permit Intake Initials						
	Comm	nents:			FSF			
L					EL ORIGENT DEPARTMENT ADDITIONS			

NOTICE OF PUBLIC HEARING



PROPOSAL: A Conditional Use permit to renew the 10-year quarry permit for Stabler Point Quarry

FILE NO:

USE20110017

TO:

Adjacent Property Owners

HEARING DATE: August 09, 2011

HEARING TIME: 7:00 PM

PLACE:

ASSEMBLY CHAMBERS

Municipal Building 155 South Seward St Juneau, Alaska 99801 APPLICANT: CBJ ENGINEERING

Property PCN: 4-B30-0-102-002-0

Owner(s):

CBJ LANDS AND RESOURCES

Size:

310 acres

Zoned:

RESIDENTIAL RURAL

Site Address: 13010 GLACIER HWY

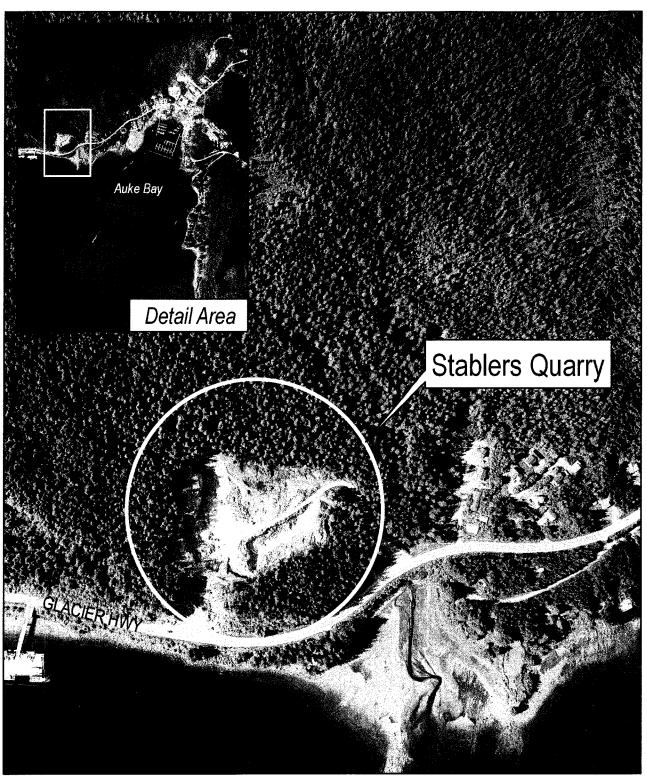
Accessed via: GLACIER HWY

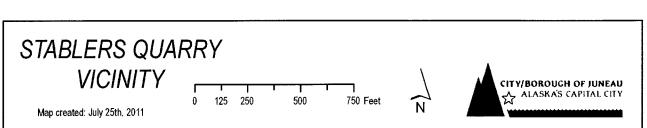
PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department no later than 8:30 A.M. on the Wednesday preceding the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a few days before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Eric Feldt at (907)-586-0764 or e-mail eric_feldt@ci.juneau.ak.us

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at www.juneau.org/plancomm.





A Conditional Use Permit Application for the Continuation of Rock Quarry Operations at CBJ's Stabler Point Quarry

I. Introduction

The City and Borough of Juneau's current Conditional Use Permit for operating a rock quarry at Stabler Point expires in August 2011. The CBJ plans to continue to operate Stabler Point Quarry into the foreseeable future and therefore requests that a new Permit be granted for another 10 year period with a continuation of existing permit conditions.

As short summary of major events at Stabler Point Quarry during the current permit period follows:

- Stabler originally operated under USE2001-00022. The original permitted quarry limits were based on the road cut required for the realignment of Veterans Memorial Highway to remove sharp curves at Stabler Point. Quarry limits were subsequently expanded in 2005 (USE2005-00020) and again in 2008 (USE2008-00007) in response to the needs of specific large construction projects and a general increase in borough wide demand for rock.
- Quarry hours and days of operation have been modified several times over the length of the current permit. USE2004-00028 approved hauling operations on Saturdays, and USE2005-00020 extended operating hours to 5:30pm for the new high school project. USE2008-00007 required that the quarry hours of operation return to those which were permitted under USE2001-00022.
- Many large Borough construction projects have utilized Stabler rock. Recent projects include: Thunder Mountain High School site work, AMHS Fast Ferry Terminal uplands, Auke Bay Commercial Loading Facility Phase I and II, AK National Guard/UAS Gym, Juneau International Airport Terminal expansion and Runway Safety Area projects. Stabler rock is also used in many CBJ street reconstruction projects, and in numerous private developments throughout the borough.
- Approximately 1.2 million tons of rock has been mined since 2001. The quarry's busiest year was 2008 with 288,000 tons of rock mined. A more typical recent year would see round 175,000 tons mined.
- The average rate of extraction in next 10 year permit period is expected to be less than past years due to fewer large public projects planned and a forecasted general down turn in the private construction sector. Projected average annual tonnage is expected to be around 200,000 tons / year.
- Some significant future projects expected to use Stabler rock: 2012 Statter Harbor expansion, realignment of Glacier Hwy through UAS/DeHart's roundabout, possibly in 2013.

II. Project Need

Continued operation of Stabler Point Quarry is important to the community of Juneau. The quarry provides:

- A reliable source of clean and durable rock for community projects.
- Economical haul costs; Trucking costs associated with transporting rock long distances adds significantly to the overall cost of rock used in construction projects. The location of Stabler Point quarry at the north end of town is an important factor in reducing haul distances and therefore cost for projects in this area of the borough. The other major source of rock in the Borough is located 10 road miles distant in Lemon Creek.
- The removal of rock for the future realignment of Veteran's Memorial Highway will be achieved concurrently with quarry rock extraction operations.

III. Extraction Permit Requirements

Much of the information of the original 2001 permit application is still valid. Pertinent updates are presented below.

1. Property Location and Legal Description

Stabler Point Quarry is located at approximately MP 13 on Veteran's Memorial Hwy in Juneau, Alaska. The legal description of the lot containing the quarry is USS 3810, Lot 1.

The property is zoned Rural Reserve. The property is bounded to the east and west by lots zoned residential (D-3) and to the south across Veteran's Memorial Hwy by zoned Waterfront commercial Industrial (WCI), except for one residence directly south of the quarry.

2. Existing Topography

The quarry is located north and inland of Veteran's Memorial Hwy atop a rock bluff overlooking Auke Bay. Existing quarry topography as of January 2011 is shown on the accompanying site map. At the time of mapping, mining has occurred on about 9 out of the 15 acres cleared. Multiple benches are currently being mined and a main quarry floor has been established at about elevation 140 ft. This is approximately 90 ft higher that the hwy elevation. Two short steep access roads, both located at the east end of the site, run between the hwy and the main quarry floor where a truck scale is located. The main haul road is paved. A parallel unpaved road provides access for tracked equipment. Both roads are gated. Other temporary roads are located at various places within the quarry to provide access to the various mining areas as needed. A large rocked pullout is located adjacent to the hwy between the two access roads. This area allows equipment to be transferred from low boy trailers well beyond the hwy

shoulder. Stripped overburden is stockpiled in a dedicated on-site storage area within the quarry limits.

3. Topographic Mapping and Typical Section of Proposed Finished Contours

The proposed finished contours are presented in both plan and a 3-D perspective views in the attachments. The final topography will have a through cut suitable for the realignment of the hwy. The quarry walls are shown as a series of 20 ft wide horizontal benches with 30 ft vertical between benches.

Also presented is a depiction of how the quarry may look at an intermediate stage of development, estimated to occur within the next ten years. By then it is expected that mining will have occurred out to the upper northern most limits with the final, highest elevation benches established. Mining should also have been completed down to the current quarry floor at 140 ft elevation. A wall of un-mined rock, a minimum of one bench high will be maintained along the western and southern perimeter of the quarry to act as a visual and sound barrier.

5. Ingress and Egress

Access to the quarry is via the two existing access roads located at the east end of the quarry site. It is anticipated that the paved eastern most access road will continue to be the quarry's main entrance for the duration of the next ten year permitting period. The adjacent unpaved rock surfaced road is used primarily for the movement of heavy tracked equipment such as mobile crushers/screens between the hwy and the quarry.

6. Map of Buildings and Structures

A truck scale was installed in the quarry in 2007. It is located on the 140 ft elevation floor level at the east end of the quarry. A re-locatable scale shack adjacent to the truck scale and a small plastic garden storage shed are the only buildings kept on-site. During construction season a rented portable restroom is also on-site. See the attached site map for the location of the truck scale and scale shack.

The location of the truck scale and buildings are not permanent. The scale and associated structures will be re-located to lower floor levels as mining progresses downwards. This may occur within the next 10 year period.

Electricity is supplied to the quarry by a combination of overhead and underground power lines. City water is supplied to the scale shack via a meter box adjacent to the hwy and a 2" diameter HDPE pipe that runs overland through the forest.

Both access roads are secured with a lockable gate at their highway entrance.

7. Narrative Statement Describing Quarry Operations

The operation of the quarry will continue as it is currently permitted.

- CBJ owns and manages the quarry, provides infrastructure (roads, truck scale, water), permitting, environmental monitoring and compliance oversight.
- A specific mining area is made available to contractors needing rock for City projects. Contractors are required to submit a mining plan for approval prior to mining. The contractor must operate under conditions imposed by the quarry usage plan. The mining plan and usage plan addresses the contractor's responsibilities while operating in the quarry.
- When space is available, mining areas may be allocated to contractors needing rock for other projects (e.g. State, Federal, and private).
- All actual mining work is done by contractors, not by CBJ.
- CBJ charges the contractor a management fee for each ton of rock mined. The fees are used to pay for CBJ's material sources operational expenses and to fund past and future material source development and reclamation expenses.

A. Site drainage Plan

Stormwater discharge from quarrying operations is regulated by the Alaska Department of Environmental Conservation's Multi Sector General Permit (MSGP) for Industrial Activities. The MSGP requires the quarry to maintain and comply with a Storm Water Pollution Prevention Plan (SWPPP). The majority of quarry runoff flows subsurface through the fractured rock of the quarry floor to a settling/collection pond located at the east end of the quarry. The pond discharges into a vegetated buffer zone. Drainage from the vegetated buffer zone is collected in the tracked vehicle access road ditch and conveyed to a sump/infiltration zone beside the main quarry access road entrance. Stormwater infiltrates into the ground at this point. When frozen ground prevents infiltration or in extreme rainfall events an overflow culvert adjacent to the sump allows stormwater to flow under the access road and on towards Auke Nu Creek. This culvert is the SWPPP's designated stormwater outfall. As mining progresses, drainage will continue to be directed eastwards to this outfall.

The ultimate drainage plan for the site at the conclusion of mining operations will be determined by the requirements of the roadway engineering design performed for the realignment of the highway.

B. Area Security

Permanent gates are installed across both access roads within 100 ft of the intersection with the highway. The gates are locked each evening to keep unauthorized vehicles from entering the quarry. Quarry information signs are posted at both entrances.

C. Methods to Minimize Noise Pollution and Visual Blight

- i) Noise Pollution: The 2001 quarry Conditional Use application contained a noise management plan prepared by Toner Nordling & Associates, Inc. However, in the years of operation since 2001 the quarry development plan has evolved. Therefore, a new technical Noise Study has been prepared by Michael Minor and Associates, Inc. for inclusion in this permit application (attached). The report models both existing and future noise impacts of quarry operations and concludes that current methods of noise mitigation are sufficient to meet code requirements. These methods currently include the following:
 - Restrict the use of exhaust brakes on trucks entering or leaving the quarry, unless required for safety reasons.
 - A constructed earthen berm at "open" east end of quarry serves as a noise barrier.
 - Maintain a rock wall around south and western perimeter. Height of the wall is generally one bench height (30 ft) or taller above the lower quarry floor levels.
 - Minimize the clearing of trees and other vegetation from around the perimeter of the quarry and encourage the regeneration of vegetation in order to diffuse noise and soften sound reflective surfaces.
 - Limit crushing activities to the lower quarry levels, locating crushers behind stockpiled material if at all possible.
- ii) <u>Visual Blight</u>: Visual blight will be minimized by leaving as many trees standing for as long as possible around the quarry perimeter to act as a visual shield. The heavily forested area containing the eagle trees between the Hwy and the quarry also acts as a substantial visual buffer.

Most of the trees located at the highest points within the quarry's mining limits have already been cleared and most overburden has already been striped to expose bare rock ready for drilling. Some overburden still awaits striping in the uppermost NW corner. The development plan is to complete the striping of the remaining overburden, and establish the upper most quarry benches with the aim of getting the active mining areas down below the screening level of the surrounding trees and topography as soon as possible. Benches will be left in the rock faces around the quarry's perimeter. Eventually the exposed rock of the benches/faces will weather to a dull grey to match the color of the existing cliffs typical in the area.

Planted cuttings and alder wildlings are well established beside the quarry access road and will continue to grow in the coming years, enhancing the aesthetics of the entrance to the quarry.

D. Quarry Hours and Days of Operation

Existing permitted quarry hours of operation are Monday – Friday 8:00AM to 4:30PM. While no change in the current hours of operation is requested at this stage,

if sufficient need could be demonstrated, quarry management would support the introduction Saturday hauling operations from the quarry and/or extended hours of operation during the week days. The applicant believes that limited quarry operations involving loading and hauling only could be allowed on Saturdays with little additional impact on the neighborhood.

E. Amount and Type of Material for Extraction

The material in the quarry is solid rock, requiring the use of explosives and crushing to produce shot rock products.

Approximately 2.3 million cubic yards of rock are potentially available for extraction under the current quarry development plan.

F. Water Table

The quarry is planned to be mined down to the elevation of the adjacent highway. Bed rock is contiguous through to the highway elevation as evidenced by the rock face exposed during the construction. No water table is visible in the highway cut face and none has been found to date in the quarry itself as mining has progressed. Surface runoff water is present in the quarry, and is either diverted around the quarry perimeter, or managed by routing through the overshot quarry floor, as explained in the quarry's SWPPP.

G. Completion Date for Extraction and Processing

Completion date depends on rate of extraction. The rate varies according to the Borough construction projects' needs, and availability of alternate sources. Due to the increasing cost of truck transportation it is anticipated that Stabler will continue to supply rock to projects mostly in the Valley area and out the road. Quarries in the Lemon Creek area, including the new Lemon Ck quarry due to be opened in 2011, will be better located to supply Lemon Creek, Downtown and Douglas projects with rock. The economic conditions and specific project needs will dictate how much overlap there will be in quarry service areas. The past decade has seen the completion of a number of large civil construction projects in the borough, e.g. JNU expansion, AMHS Fast Ferry Terminal expansion, Auke Bay Commercial Loading Facility, Thunder Mountain High School, etc. A lot of rock for these major projects came from Stabler Point Quarry. The current construction boom is winding down with fewer major projects planned for the coming decade. Demand for rock will likely decline accordingly.

It is likely that within the next 10 year period the one million cubic yards of rock remaining above the quarry's current lowest floor level (nominal elevation 140 ft) will be mined, and a new quarry floor level established at elevation 110 ft.

H. Schedule for Site Restoration Work

The restoration schedule is very dependant on actual extraction rate. However, the development plan is to establish the quarry's final upper level benches and faces along the northwest boundary within the next few years, and proceed to mine down from these fixed points. These benches will be allowed to be colonized by alders and other native vegetation. An example of successful colonization can be seen on the rock embankment of the quarry access road. Alders are already higher than the willow cuttings that were planted soon after the road was constructed, in 2005. The restoration plan calls for stable benches and with clean rock faces to be left at the perimeter of the quarry as shown in attached drawings and renderings.

I. Control of Airborne Particulates

Dealing with dust is a fact of life when working in a quarry. Anytime rock is handled, processed or transported dust generation is a possibility. The control of airborne particulates is important for the health and safety of quarry workers and for the well being of the surrounding neighborhood. Juneau's wet and rainy climate is generally conducive for keeping dust levels down. However dry spells do occur and dust must be contended with. The quarry operations most likely to produce dust are drilling, blasting, and crushing/screening. Drills used in the quarry are required to be fitted with devices to collect and separate the fine airborne particulates from the air used to blow the drill cuttings out of the bore holes. City water is piped to the lower quarry level for use by contractors during crushing and screening operations. Spray bars are required to be used on crushers and screens to keep the dust levels down. Regular cleaning of the paved access road reduces the amount of dust generated by trucking on dry days. Water trucks spray down quarry roads on exceptionally dry days in order to keep dust down.

J. Geophysical Hazards

The west end of the quarry development area lies below a large cliff with several overhanging sections. The slopes below the cliff (and above the highway) contain some large boulders indicating past possible cliff instability issues. A geotechnical evaluation of the stability of the cliffs will be commissioned prior to commencing quarry operations in this area. The results of the geotechnical evaluation will dictate whether parts of the cliff face will need to be removed or otherwise stabilized.

K. Date of Establishment of Operations / History of Adjacent Land Development

<u>Date of Establishment</u> - Brief permit history of Stabler Point Quarry...

- 1997-2001: Rock mined from the area of the roadside cliff for various projects.
- 2001:CBJ obtains its current Conditional Use permit, USE2001-00022, allowing the operation of the quarry for a 10 year period, M-F 8:00 AM to 4:30 PM
- 2004: USE 2004-00028 modifies USE 2001-00022. The main change is to permanently allow hauling operations to occur on Saturdays.

- 2005: USE 2005-00020 modifies USE 2004-00028 by extending the hours of operation to 8:00 AM to 5:30 PM to facilitate construction of new high school.
- 2007: Electricity and truck scale installed at quarry.
- 2008: The quarry's busiest year to date. Stabler rock was used on two adjacent Auke Bay harbor projects.
- 2008: USE 2008-00007 allowed the expansion of the quarry's limits and the operation of secondary crushers, but also imposed new restrictions on the quarry's hours of operation, essentially rescinding previously issued USE 2004-00028 and USE 2005-00020.
- 2011: Application for renewal of Use Permit.

History of Adjacent Land Development

Adjacent lands to the east and west have both been developed as residential. The nearest residential property to the east is approximately 600 ft from the quarry limits and to the west approximately 3,100 feet. A single residence is located across Veteran's Memorial Hwy south of the quarry. Waterfront commercial properties and public facilities have been developed southwest of the quarry along the shores of Auke Bay. No development has occurred north of the quarry. The northern boundary is Tongass National Forest.

L. Additional relevant Information

Eagles

The quarry is adjacent to several designated eagle nest trees. Since at least 2005, a pair of eagles have consistently occupied and successfully raised chicks every year from the nest located closest to the quarry. They have shown remarkable ambivalence to on-going quarry activities (including blasting). Given their exposure and demonstrated history of tolerance to past quarry operations it is not expected that further quarrying operations will have any impact on the future nesting activities of the resident eagle pair.

IV. Conditional Use Permit Requirements

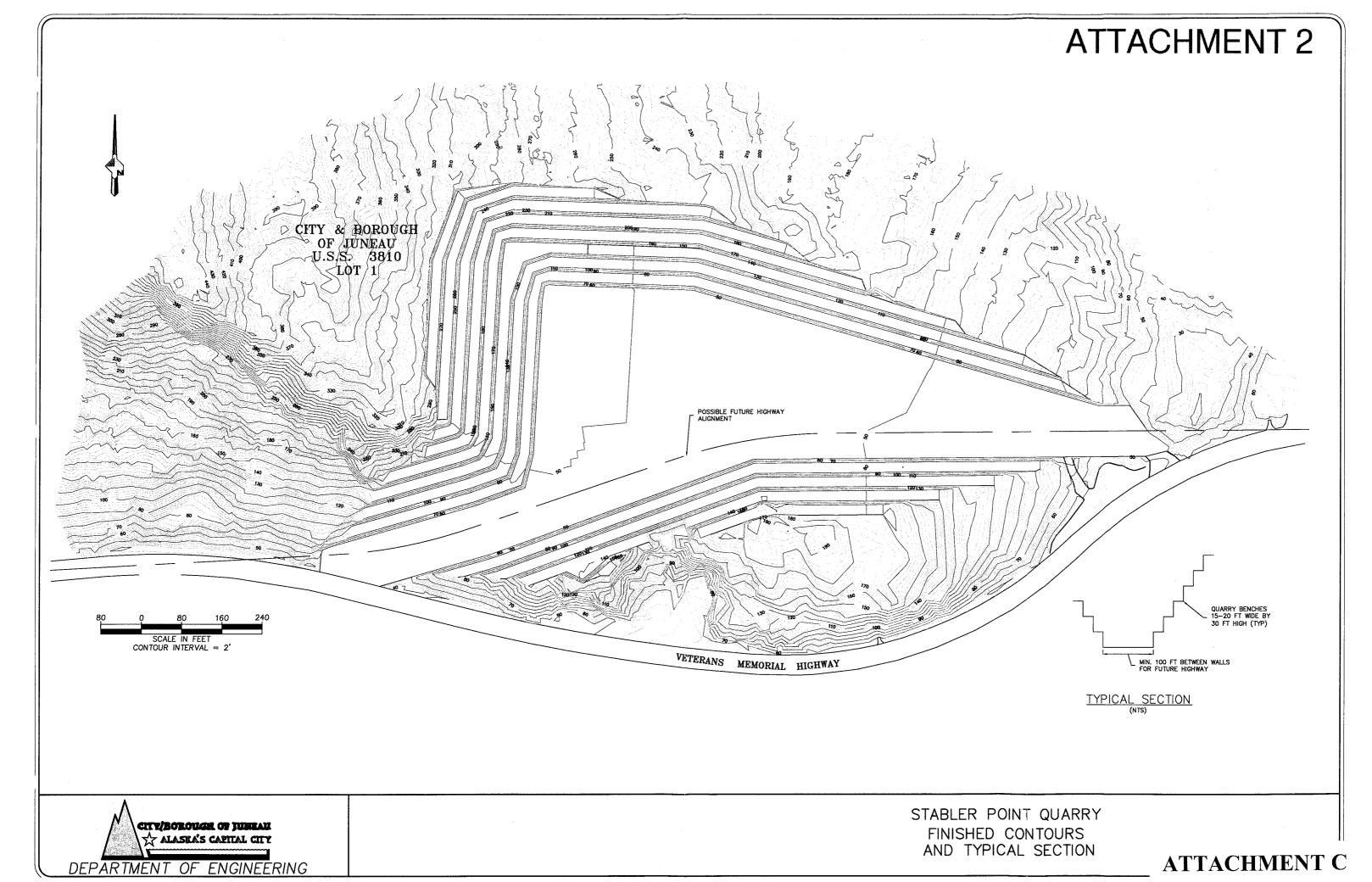
Exhibits, Drawings & Attachments

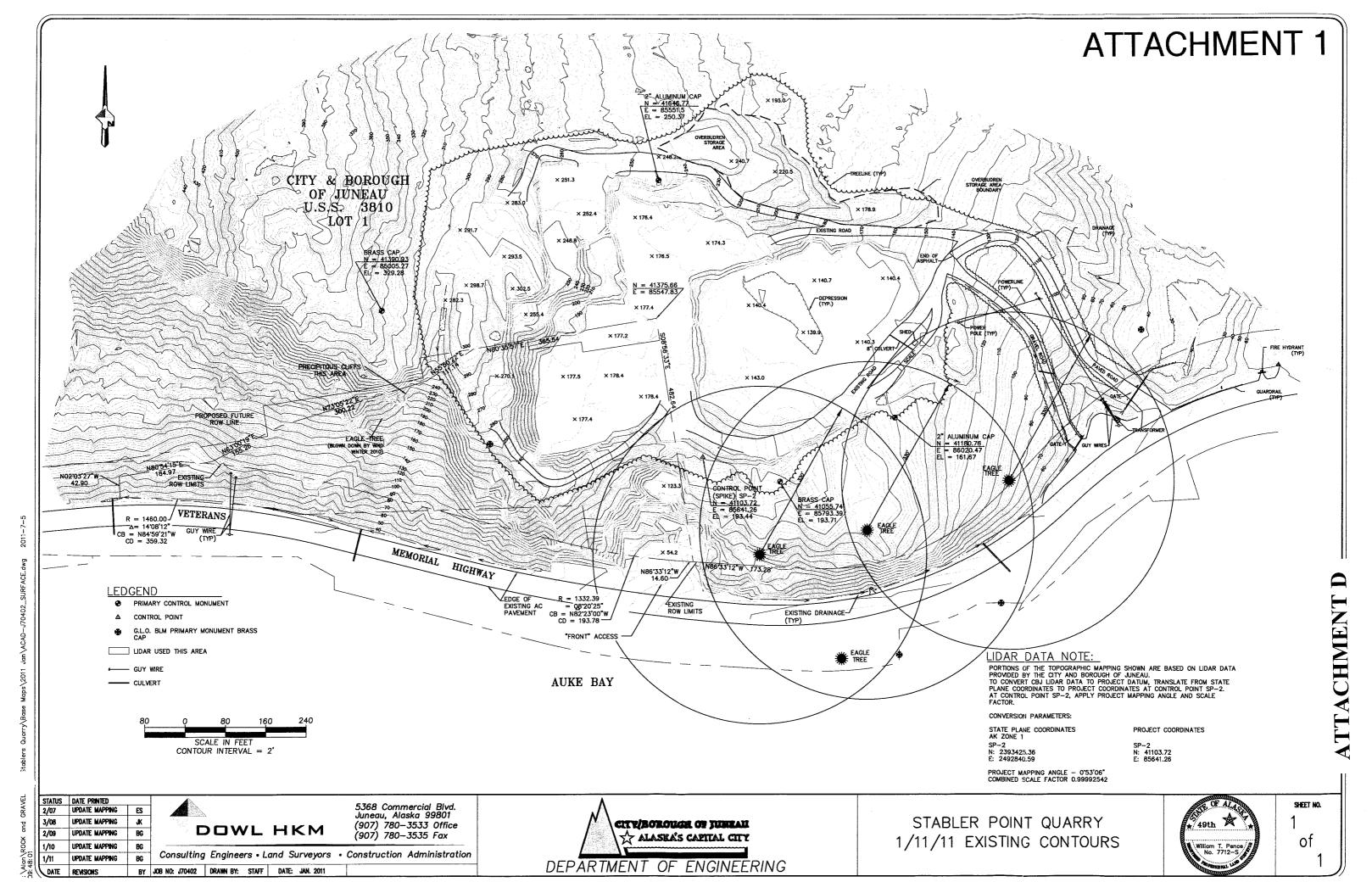
Attachment 1: Existing contours
Attachment 2: Finished contours

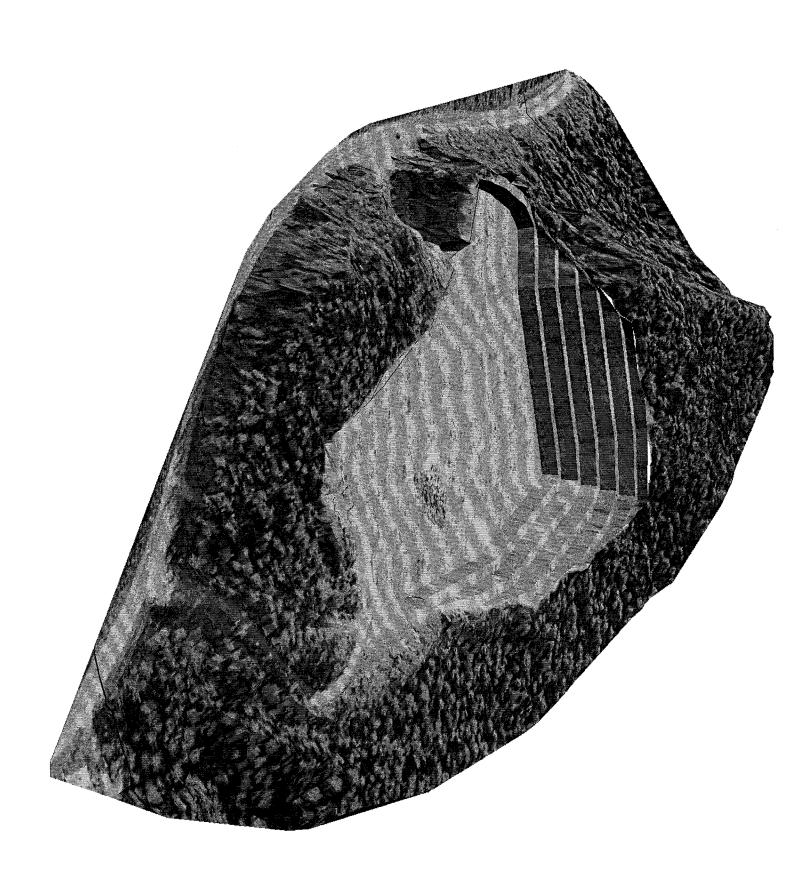
Attachment 3: 3D View final contours

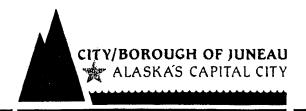
Attachment 4: 3D View mined to 140 ft elevation

Attachment 5: Stabler Quarry Noise Study Attachment 6: Public meeting documents









PLANNING COMMISSION NOTICE OF DECISION

Date: August 17, 2001

File No.: USE2001-00022

CSP2001-00010

Bob Millard CBJ, Engineering 155 South Seward Street Juneau, Alaska 99801

Application For:

A Conditional Use permit and City Project review for a proposal to develop and

operate a rock quarry at Stabler's Point.

Legal Description:

USS 3810, Lot 1

Parcel Code No.:

4-B30-0-102-002-0

Hearing Date:

August 14, 2001

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated August 10, 2001 and approved the development and operation of a rock quarry at Stabler's Point to be conducted as described in the project description and project drawing submitted with the application and with the following conditions:

- 1. That all vehicles hauling from this site shall operate with tailgates, covers or other similarly effective methods.
- 2. That the applicant shall or shall cause signs to be posted to prohibit public access to the area, to meet the requirement of the approved traffic control plan, to provide public notice of future blasting a minimum of 24 hours prior to blasting, and to alert the public of the presence of blasting and heavy machinery activities.
- 3. That the hours, days and dates of operation shall be 8 AM-4: 30 PM, Monday through Friday, all year except State holidays.
- 4. That blasting operation shall be further limited to Monday through Friday of each week between the hours of 10:00 to 12: 00 P.M. and 1:00 to 3:00 P.M.
- 5. That the quarry permit shall expire 10-years after the date of approval.
- 5. That the applicant shall have the quarry operators submit individual mining plans and approve them based on conformance with this Conditional Use Permit prior to authorizing the mobilization of equipment or

- 155 So. Seward Street, Juneau, Alaska 99801-1397 -

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work in the quarry area. Each mining plan shall be prepared by a civil engineer and other required professionals.

- 7. That the applicant shall require each quarry operator, as part of the individual mining plan, submit a blast plan for approval by the CBJ Engineering Department. The blast plan shall be reviewed by an independent blast consultant to insure a safe and controlled blast. Each blasting plan shall comply with CBJ specification 02090-Blasting Controls (Attachment K).
- 8. That the applicant shall require each quarry operator, as part of the individual mining plan, obtain an traffic control plan from the ADOT/PF to address access to and from the site and to control traffic for the quarrying and blasting activities.
- 9. That the applicant shall give or shall cause proper notice to be given to the Police Department and the Fire Departments 24 hrs in advance of each blast.
- 10. That the applicant and all quarry operators shall not store explosives on site, except that which is immediately necessary for the next blast;
- 11. That the applicant shall monitor or cause drainage to be monitored during development and provide treatment of drainage such as check dams, silt fences, and retention ponds, and maintenance of improvements, in order to assure water quality standards are met. A 2% slope shall be maintained for the pit floor so that the final pit drainage will be directed toward the existing south quarry entrance Water will be diverted away from the areas of active excavation where feasible. Each individual mining plan will address water quality and include an assessment of the capacity of the existing drainage ways to determine what improvements may be necessary. With particular attention paid to protecting Auk Nu Creek. This assessment shall be completed by a Civil Engineer.
- 12. That the applicant shall reclaim or shall cause the quarry site to be reclaimed as per the notes and cross sections presented in Attachments A and B. The proposed reclamation plans will insure that adequate finished faces and benches are in place and loose rock removed, during the period between projects even if the entire quantity of rock has not been removed.
- 13. That the applicant shall control or shall cause dust to be controlled caused by excavation, truck hauling, rock crushing, or other aspects of the operation;
- 14. That the applicant shall repair, or cause the repair of any damage to the Glacier Highway as a result of the quarry operation. If there is visible damage to the roadway due to hauling or mining operations the roadway shall be repaired with concurrence from DOT/PF
- 15. That the applicant shall require a bond be posted from all quarry operators adequate to cover the costs of road cleaning from spilled or tracked material from the quarry operation. The applicant shall remove or shall cause to be removed all spilled materials immediately from the public roadways and that mud and debris tracked onto the roads from the quarry site be cleaned a minimum of once a week.

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- 16. That the applicant shall notify each operator of the quarry of required load limits.
- 17. That the applicant shall insure lighting does not produce glare to motorist on the roadway.
- 18. That the applicant shall operate or shall cause the quarry to be operated according to the application proposal including exhibits, drawings, and attachments except that all the conditions contained herein shall take precedence.
- 19. That the applicant shall ensure that the rock extraction operations are scheduled consistent with the recommendations of the U.S. Fish and Wildlife Service for the protection of nesting eagles;
- 20. That the applicant shall place or shall cause a gate to be placed at the eastern driveway entrance, and require the reconfiguration of the driveway and placement of a gate at the south entrance according to plans described in the traffic control plan at the time extraction has proceeded far enough into the bluff, to allow trucks to enter and exit the site through a single driveway opening. The quarry manager will make that determination in consultation with DOT/PF.
- 21. That the applicant shall retain or cause a natural buffer similar to that proposed for the eastern end of the quarry to be retained at the western end of the quarry site for the purpose of a visual and noise barrier. This buffer can be pierced to accommodate a driveway access. In addition, a natural buffer shall be retained for noise and visual screening during all quarrying operations through out the site when at all feasible.
- 22. That the applicant seed and plant the approach to the relocated eastern access driveway according to the plans shown in the Corps of Engineers permit. (Attachment H)
- 23. That the areas identified in Exhibit I impacted with rock fall be excluded from the extraction limits until such time that a qualified expert in this type of geophysical hazard evaluates the site and proposes guidelines for its development. Also, that these guidelines be made part of any approved mining plans for these sites, and written notification given to all operators.
- 24. That the recommended sound level limitation for the Leq in Table 1 read 65dBa or 5dBa above background noise whichever is less.
- 25. That any crusher operation be limited to primary crushing and that no crusher be placed on site unless the crusher location is determined to have an adequate natural buffer to screen sound and sight by the quarry manager.
- 26. That the applicant ensures that roadway drainage from the proposed relocated eastern driveway drain to the south.
- 27. That the applicant shall have all operators of the quarry conduct their activities in accordance with all requirements of the noise management plan, blasting and noise controls, temporary environmental controls, and stipulations for the protection and of existing facilities.
- 28. That a bond be posted for site restoration according to attached memo from Terry Brenner dated August 10, 2001(Attachment I).

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- 29. That the site clearing be consistent with needs to retain sound and visual barriers for the quarry operation and that prior to any clearing, clearing limits be flagged and be reviewed for approved by CDD.
- 30. That the individual blasts within the quarry be limited to a maximum of 6,000 cubic yards.
- 31. The applicant will inspect and repair as necessary, the CBJ water main that runs through the area along Glacier Highway.

Attachment:

An August 10, 2001, memorandum from Tim Maguire Community Development to the

CBJ Planning Commission regarding USE2001-00022.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ §01.50.030 (c).

Effective Date:

The permit is effective upon approval by the Commission (August 14, 2001)

Expiration Date:

The permit will expire 18 months after the effective date or February 14, 2003, if substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension

must be submitted thirty days before the permit expires.

Project Planner:

Tim Maguire, Planner

Johan Dybdahl, Chairman

Planning Commission

Filed With City Clerk

cc: Plan Review

Fred Thorsteinson

Terry Brenner

Steve Gilbertson

Point Lena

Frank Mielke

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ-adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA-trained architect or other ADA trained personnel with questions about the ADA: Department of Justice - 202-272-5434, or fax 202-272-5447, NW Disability Business Technical Center - 1-800-949-4232, or fax 360-438-3208

ATTACHMENT 5

Stabler Point Quarry

Noise Study

Prepared for City and Borough of Juneau 155 South Seward Street Juneau AK99801

Produced by Michael Minor & Associates, Inc.
Portland Oregon

ATTACHMENT G

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Introduction

This technical noise study is for the continued operation of the Stabler Point Quarry, located northwest of Juneau Alaska, off Glacier Highway. The report was prepared at the request of the Engineering Department of the City and Borough of Juneau (CBJ). The report provides an introduction to noise and noise descriptors, land use near the proposed facility, project noise guidelines existing noise sources, and projected noise levels from facility operations. Project noise impacts and noise mitigation measures are also discussed as related to facility operation.

Project Description

The proposed project is to continue to use the Stabler Point Quarry for approximately 20 years, and excavate the area down to an elevation that is equal to the Glacier Highway. At the end of the quarry operations there will be a fairly significant through-cut that can be used to realign the Glacier Highway and correct the existing curve. The area between the quarry and the highway, which contains three trees with nesting eagle, will be left untouched.

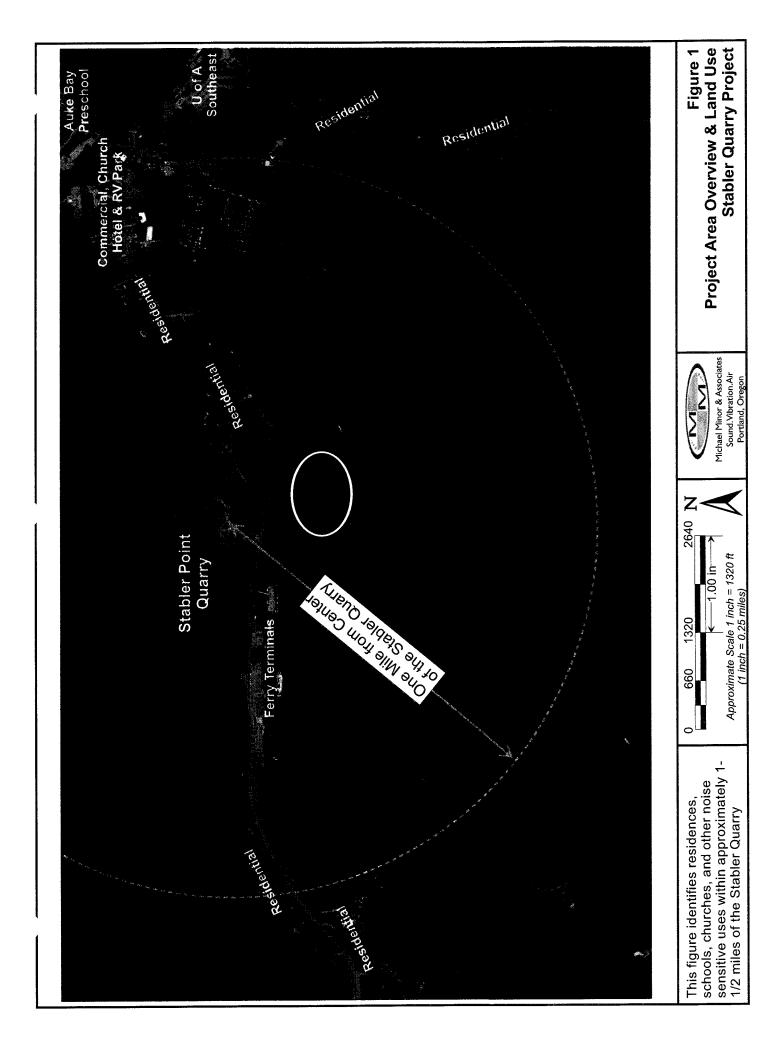
Currently, the top of the quarry is visible at several single family residences located east of the quarry along the coast, and at some residences across Auke Bay. The quarry operations are currently just barely visible to residential properties to the west of the quarry, past the ferry terminal. The exposure of the mine toward the west is due to the current mining operations on top of the rocky ridge in the SW corner of the current cleared area. The current plan for the next 10 years is to continue to mine the cleared area, and as the mining proceeds, the project will leave a series of stepped, 15 to 20 foot wide benches, 30 feet high down the finished quarry walls. These steps will act as a shielding from rock crushing and associated mining activities. Mine operational plans are to maintain a rock wall to shield the western and southern perimeter of the lower working levels, and to also maintain the existing overburden berms at the eastern end of the quarry to act as sound and visual barriers.

Land Use

The proposed site is an existing quarry and along the Glacier Highway, northwest of Juneau Alaska. Much of the land in the immediate area is undeveloped forest. The nearest residential areas were identified north and south of the Glacier Highway directly east of the site. Several single family residences were identified within 500 to 800 feet from the quarry entrance from the Glacier Highway. These residential areas are shielded from the quarry by existing topographical conditions, including the area with the three eagle nests and the natural earth berm to the east of the Stable Quarry access roads.

West of the site there are several single family residences, beginning approximately 4300 feet west of the site, near the ferry terminals. Several more single family homes were identified along Indian Cover Drive and Otter Way. Other noise sensitive land uses with 1 to 1.5 miles of the site include several single and multi-family residences, schools, churches, a hotel, and

other commercial uses near Auke Bay. Figure 1 shows an overview of the site with the nearby residential land uses identified.



What is Sound (Noise) and How Do We Quantify It?

Sound is any change in air pressure that the human ear can detect, from barely perceptible sounds, to sound levels that can cause hearing damage. These changes in air pressure are translated to sound in the human ear. The greater the change in air pressure, the louder the sound. For example, a quiet whisper in the library creates a relatively small change in the room air pressure, whereas air pressure changes are much greater in the front row of a rock concert.

In addition to the loudness of sound, frequency is a term also used to describe sound. The frequency of sound is determined by the number of recurring changes in air pressure per second. A sound that contains a relatively high number of pressure changes per second is generally referred to as a high frequency noise or "high-pitched." Common examples of high-frequency noise would include a referee's whistle or a triangle chime. A sound that has a low number of pressure changes per second is referred to as low frequency or low-pitched noise (for example, a bass drum or helicopter).

A person's response to noise is subjective and can vary greatly from person to person. Some key factors that can influence an individual's response include the loudness, frequency, the amount of background noise present, and the nature of the activity taking place that the noise affects. For example, boisterous children playing outside during the day, with background traffic noise present, is generally less obtrusive than children making the same amount of noise during the nighttime sleeping hours inside a house. Keeping with this theme, when sounds are unpleasant, unwanted, or disturbingly loud, people normally consider them to be "noise."

How Do We Measure Sound?

We measure sound both in terms of loudness and frequency. The unit used to measure the loudness of noise is called a decibel (dB). A range from 0 to 120 dB is the typical range of hearing. While the loudness of sound is an easy concept for most people, a sound's frequency is just as important in understanding how we hear sounds.

Common Noise Units and Descriptors

Hz - Hertz, unit of frequency

dB - Decibels

dBA - Decibels with A-weighting

L_{eq} – Energy-equivalent sound pressure level

Frequency is measured in terms of the

number of changes in air pressure that occur per second. The unit we use to measure the frequency of noise is called hertz (Hz). While the human ear can detect a wide range of frequencies from 20 Hz to 20,000 Hz, it is most sensitive to sounds at the middle frequencies (500 to 4,000 Hz). The human ear is progressively less sensitive to sound at frequencies above and below this middle range. For example, a noise level of 60 dB at 200 Hz would be considerably less noticeable to the average person than 50 dB at 1,000 Hz. The human ear is most sensitive to sound at frequencies of 1000 to 3000 Hz.

To account for the human ear's sensitivity to frequencies, an adjustment is made to the dB measurement scale. The adjusted scale, referred to as the A-weighted decibel scale, provides a more accurate measure of what the human ear can actually hear. When the A-weighted scale is used, the decibel levels are designated as dBA. This unit of measurement is used in this report.

For a sense of perspective, normal human conversation ranges between 44 and 65 dBA when people are about 3 to 6 feet apart. Very slight changes in noise levels, up or down, are generally not detectable by the human ear. The smallest change in broadband noise that a human ear can perceive is about 3 dBA, while increases of 5 dBA or more are clearly noticeable. For most people, a 10 dBA increase in noise levels is judged as a doubling of sound level, while a 10 dBA decrease in noise levels is perceived to be half as loud. For example, a person talking at 70 dBA is perceived as twice as loud as the same person talking at 60 dBA.

What Are Typical Neighborhood Noise Levels?

In most neighborhoods, nighttime noise levels are noticeably lower than daytime noise levels. In a quiet rural area at night, such as the residential area along Glacier Highway, noise levels can range between 32 and 35 dBA during nighttime periods with little to no wind or animal activity (birds chirping) and if no traffic, aircraft, marine, or other noise sources are active. The dominate noise source in this case would be wind, and residual noise from the City and Borough of Juneau. As residents start their day and local traffic increases, this same rural area would be expected to have noise levels ranging from 45 to 60 dBA. While noise levels in urban neighborhoods are louder than rural areas, they share the same pattern of lower noise levels at night than during the day. Quiet urban nighttime noise levels range from 40 to 50 dBA. Noise levels during the day in downtown Juneau area are predicted to frequently be as high as 65 to 75 dBA, with on-site noise measurement taken several years ago, for the Alaska Juneau Mine, supporting background noise levels of this magnitude.

How Do We Take Into Account That Noise Changes Over Time?

Noise levels from most sources tend to vary with time. For example, noise levels increase when a car approaches, then reach a maximum peak as it passes, and decrease as the car moves farther away. In this example, noise levels within a one minute timeframe may range from 45 dBA as the vehicle approaches, increase to 65 dBA as it passes by, and return to 45 dBA as it moves away. To account for the variance in loudness over time, a common noise measurement is the equivalent sound pressure level (L_{eq}). The L_{eq} is defined as the energy average noise level, in dBA, for a specific time period (for example, one minute). Therefore, assuming the energy average noise level was 60 dBA during the entire period of time the car could be heard as it passed by, the noise level would be stated as 60 dBA L_{eq} .

How Does Sound Reduce As It Travels From the Source To the Receiver?

There are several factors that determine how sound levels decrease over a distance. Under ideal conditions, a point noise source in free space will attenuate at a rate of 6 dB each time the distance from the source doubles (using the inverse square law). An ideal line source

(such as constant flowing traffic on a busy highway) reduces at a rate of approximately 3 dB each time the distance doubles. Under real-life conditions, however, interactions of sound waves with the ground often result in attenuation that is slightly higher than the *ideal* reduction factors given above. Other factors that affect the

Attenuation refers to the reduction in loudness, or amplitude, of noise as it moves away from the noise source

attenuation of sound with distance include existing structures; topography; foliage; ground cover; and atmospheric conditions such as wind, temperature, and relative humidity. The potential effects of these factors on sound propagation are described below:

- Existing structures can substantially affect noise levels. Structures can reduce noise by physically blocking the sound transmission and, under special circumstances, may cause an increase in noise levels if the sound is reflected off the structure and transmitted to a nearby receiver location. Measurements have shown that a single-story house has the potential, through shielding, to reduce noise levels by as much as 10 dB or greater. The actual noise reduction will depend greatly on the geometry of the noise source, receiver, and location of the structure. Increases in noise caused by reflection are normally 3 dB or less, which is the minimum change in noise levels that can be noticed by the human ear.
- Topography includes existing hills, berms, and other surface features between the noise source and receiver location. As with structures, topography can potentially reduce or increase sound, depending on the geometry of the area. When placed between the noise source and receiver, hills and berms can have an effect on noise levels. In many situations, berms are used as noise mitigation because they physically block the noise source from the receiver location. In some locations, however, the topography can cause an overall increase in sound levels by either reflecting or channeling the noise towards a sensitive receiver location.
- Dense foliage can slightly reduce noise levels. The Federal Highway Administration (FHWA) assumes up to a 5 dBA reduction in traffic noise for locations that have at least 100 feet of dense evergreen foliage.
- Ground cover between the receiver and the noise source can also affect noise transmission. For example, sound will travel very well across reflective surfaces such as water and pavement, but can be attenuated when the ground cover is field grass, lawn, or even loose soil. Snow pack can also increase the attenuation of sound when compared to hard soil or pavement
- Atmospheric conditions that can affect the transmission of noise include wind, temperature, humidity, and precipitation. Wind can increase sound levels if it is blowing from the noise source to the receiver; conversely, it can reduce noise levels if blowing in the opposite direction. Noise propagation can also be affected when the temperature gradient is such that an inversion is formed. Other atmospheric conditions such as humidity and precipitation are rarely severe enough to result in noticeable changes in noise level propagation. Because weather conditions frequently change, it is not realistic to consider atmospheric conditions in traffic noise studies.

Table 1 provides some common noise sources and compares their relative loudness to that of an 80 dBA source, such as a garbage disposal or food blender.

Noise Source or Activity	Sound Level (dBA)	Subjective Impression	Relative Loudness (human judgment of different sound levels)
Jet aircraft takeoff from carrier (50 ft)	140	Threshold of pain	64 times as loud
50-hp siren (100 ft)	130		32 times as loud
Loud rock concert near stage Jet takeoff (200 ft)	120	Uncomfortably loud	16 times as loud
Locomotive warning horn (90 feet)	110		8 times as loud
Jet takeoff (2,000 ft)	100	Very loud	4 times as loud
Heavy truck or motorcycle (25 ft) OHV high engine revolutions (20 ft)	90		2 times as loud
Garbage disposal, food blender (2 ft)	80	Moderately loud	Reference loudness
Passenger car at 65 mph (25 ft)	70		1/2 as loud
Large store air-conditioning unit (20 ft) OHV at idle (20 ft)	60		1/4 as loud
Light auto traffic (100 ft)	50	Quiet	1/8 as loud
Bedroom or quiet living room Bird calls	40		1/16 as loud
Quiet library, soft whisper (15 ft)	30	Very quiet	
High quality recording studio	20		
Acoustic Test Chamber	10	Just audible	
	0	Threshold of hearing	

Noise levels used in this analysis are stated as sound pressure levels in terms of decibels on the A-scale (dBA). The A-scale is used in most ordinances and standards, including the applicable standards for this project. The primary noise level descriptor used in this analysis is the L_{max} . A complete list of noise descriptors that are commonly used are provided below for reference. The L_{max} was selected as the main descriptor because it follows the City and Borough of Juneau Code and is the easiest to for most people to understand.

- L_{eq} (equivalent continuous sound level): The constant sound level in dBA that, lasting for a time "T," would have produced the same energy in the same time period "T" as an actual A-weighted noise event.
- L_{max} (maximum A-weighted sound level): The greatest continuous sound level, in dBA, measured during the preset measurement period.
- L_{min} (maximum A-weighted RMS sound level): The greatest RMS (root-mean square) sound level, in dBA, measured during the preset measurement period.
- Lxx (statistical sound level descriptor): The sound level descriptor L_{xx} is defined as the sound level exceeded XX percent of the time. For example, during a 1-hour measurement, an L10 of 85 dBA means the sound level was at or above 85 dBA for 6 minutes (10%) of the hour. The periods over the 85 dBA levels could also occur at different time, such as each time a truck passes by the measurement location.

Existing Area Noise Sources

Existing noise sources in the area include traffic on the Glacier Highway, aircraft from the Juneau Airport, watercraft, helicopters and floatplanes in the summer. For the residential areas along the Glacier Highway, traffic on the highway and aircraft from Juneau Airport are some of the more notable noise source in the area. Noise from the quarry operations may also be noticeable, depending on the activity and atmospheric conditions. Based on past measurement in Juneau during the AJ Mine EIS and measured noise levels in other areas of Alaska, noise levels are projected to range from 45 to 60 dBA during daytime hours, and 30 to 45 dBA during nighttime hours.

One of the dominate noise sources in the Auke Bay area, especially during summer months, are helicopters taking tourists on scenic flights to the glacier and ice fields. There are also several light planes that fly the Juneau to Skagway route across Auke Bay. Other notable noise producing activities in this area include harbor construction projects, barging operations, and noise related to the operations of the ferry system and other marine traffic, including boat traffic from the three marinas near the project site.

Project Noise Permit Conditions

The current City and Borough of Juneau regulations for this type of use are contained in Chapter 49.15, Permits, City and Borough of Juneau Municipal Code. Under Article G-11, Chapter 49.15.330, permit conditions could restrict noise levels from operation of this type of facility to 65 dBA at the property line during daytime hours, and 55 dBA at the property line during nighttime hours. Daytime is considered between 7:00 am and 7:00 pm, with nighttime defined at 7:00 pm to 7:00 am.

Current permit conditions restrict the operations of the Stabler Point Quarry to the hours of 8:00 am and 4:30 pm daily. In addition, as part of the permit conditions, the maximum allowable noise levels would be 65 dBA at the nearest property line during daytime hours.

Because the facility would be closed during nighttime hours, any nighttime noise restriction for the site is not relevant.

The propose purpose of this analysis is to provide the predicted noise levels from the facility during typical operations. The facilities operational noise levels were predicted for several nearby residences and also at several sites where noise related complaints have been received.

Methods of Noise Projections

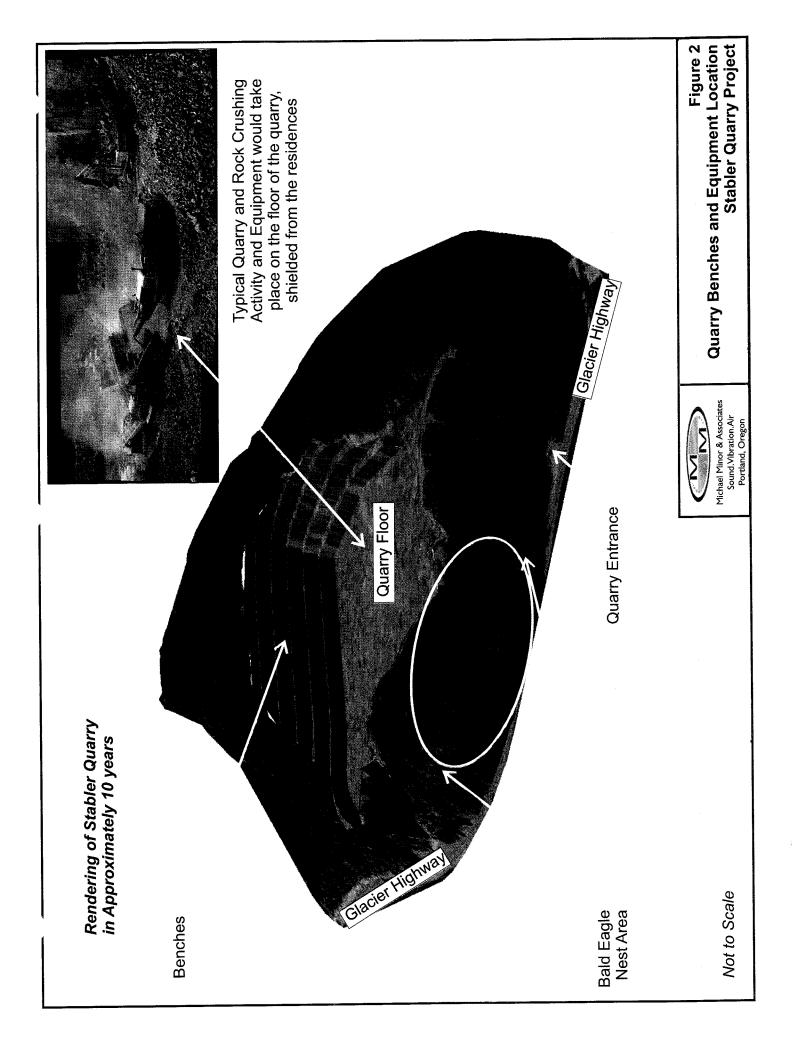
The analysis was performed using standard acoustical formulas, information from the City and Borough of Juneau, and reference noise levels for equipment in use at the site. The reference noise levels uses in the analysis are provide in Table 2. The table provides typical noise levels during operation, noise levels that could be produced during heavy activity, and typical idle or low level operational noise.

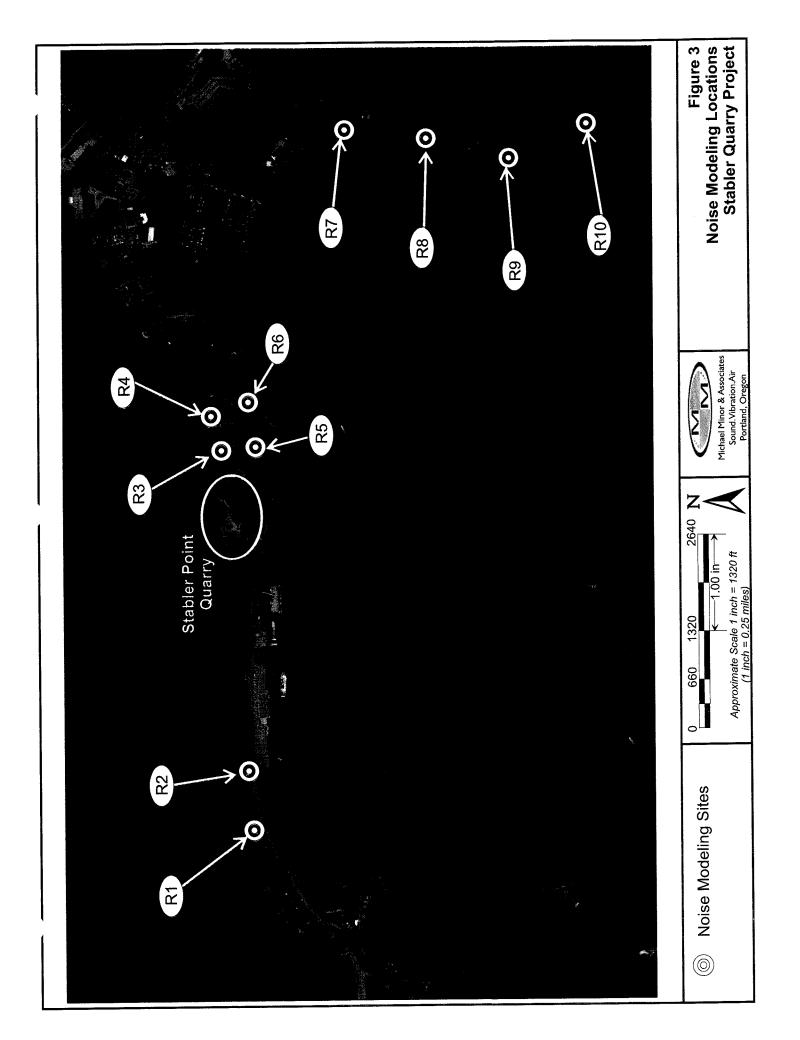
Back Hoe CAT 325 Compressors & Light trailers Dozer D9/10/11 Cat Excavator - Hitachi 3500 Excavator - P&H 4100 Elect Grader/Scraper Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	68 68 85 82 82 80 82 72	78 74 88 88 86 82 86 76	Full Load 78 78 94 92 90 84 88	Measured and/or US DOT - FHWA Measured and/or US DOT - FHWA US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines Measured and/or US DOT - FHWA Measured and/or US DOT - FHWA
Compressors & Light trailers Dozer D9/10/11 Cat Excavator - Hitachi 3500 Excavator - P&H 4100 Elect Grader/Scraper Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	68 85 82 82 80 82	74 88 88 86 82 86	78 94 92 90 84 88	Measured and/or US DOT - FHWA US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines Measured and/or US DOT - FHWA
trailers Dozer D9/10/11 Cat Excavator - Hitachi 3500 Excavator - P&H 4100 Elect Grader/Scraper Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	85 82 82 80 82	88 88 86 82 86	94 92 90 84 88	US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines Measured and/or US DOT - FHWA
Excavator - Hitachi 3500 Excavator - P&H 4100 Elect Grader/Scraper Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	82 82 80 82	88 86 82 86	92 90 84 88	of Mines US DOT - FHWA/EPA and US Bureau of Mines US DOT - FHWA/EPA and US Bureau of Mines Measured and/or US DOT - FHWA
Excavator - P&H 4100 Elect Grader/Scraper Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	82 80 82	86 82 86	90 84 88	of Mines US DOT - FHWA/EPA and US Bureau of Mines Measured and/or US DOT - FHWA
Elect Grader/Scraper Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	80 82	82 86	84 88	of Mines Measured and/or US DOT - FHWA
Mine Truck - CAT 777 Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	82	86	88	
Mine Truck - Idling CAT 793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher				Measured and/or US DOT - FHWA
793/785/789 Mine Truck - Normal Op CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	72	76		
CAT 793/785/789 Rock Drill - IR DM-M2 Rock Jaw Crusher	1	70	78	Measured and/or US DOT - FHWA
Rock Jaw Crusher	84	88	90	US DOT - FHWA/EPA and US Bureau of Mines
	86	92	96	US DOT - FHWA/EPA and US Bureau of Mines
	76	86	89	Measured and/or US Bureau of Mines
Rock Cone Crusher	76	84	88	Measured and/or US Bureau of Mines
Rock Screen	76	82	86	Measured and/or US Bureau of Mines
Utility Trucks	68	72	76	US DOT - FHWA/EPA and US Bureau of Mines
Water Treatment Plant - Pumps	64	66	70	US DOT - FHWA/EPA and US Bureau of Mines
Utility Equipment	82	68	90	Measured and/or US DOT - FHWA

In general, the site is far enough from most noise sensitive receivers to be treated as a point source. As previously described, noise levels typically reduce by 6 dB per doubling of distance for point sources. There are several factors that contribute to the noise projections, including ground cover, shielding by the quarry walls, and topographical conditions between the quarry and the modeling site. The ground cover between the receiver locations and the quarry site was included in the projections. Receivers located near the quarry are all shielded by dense foliage, and for those receivers, a soft ground cover was assumed. For those receivers located across Auke Bay, a hard reflective surface was assumed to account for the transmission of noise across the water. Topographical conditions in the area were also an important consideration, as the Stabler Point Quarry is located slightly up-hill from most of the noise sensitive properties. The shielding effects of the benches of the quarry were include in the analysis where appropriate.

Project noise levels were projected for the current conditions, and future conditions. The future noise levels projections are predicted using the assumptions on how the quarry will look in approximately 10 years, after the quarry is benched down and the equipment is better shielded from the receivers. Figure 2 is a depiction of how the quarry is expected to look in 10 years. Note the benches and location of equipment and the shielding that the benches provide to noise sensitive properties near the site. Figure 2 also provides a sample picture of a rock crushing operation.

The locations selected for noise modeling were based on the land use and proximity to site. Receiver R1 and R2 are located to the west of the quarry, near the Ferry terminal and the Auke Nu Cove area. Receiver R3 and R4 are some of the nearest to the site, located north the Glacier Highway east of the site near Oxford Street. Two addition noise modeling sites, R5 and R6, were selected south of the Glacier Highway, east of the site, on and near Auke Nu Drive. Finally, there are four noise modeling locations along Fritz Cove Road, southeast of the site (R7 through R10). These four sites are all located along the bay, and were modeled assuming the more efficient sound transmission characteristics of sound traveling water. Figure 3 provides an aerial view of the general area, location of the quarry, and the 10 noise modeling locations used in this analysis.





Project Noise Modeling Results

Noise levels were projected assuming typical operational characteristics for this type of facility. Then analysis assumes simultaneous operations of dozers for clearing and grubbing, excavators and mine haul trucks to transport the excavated material, water trucks to keep dust at a minimum, rock drills in preparation for blasting, and rock crushing operations. Although it is highly improbable that all of these operations would actually occur at the same time, using these assumptions allows for a worst case analysis of the potential noise from the site.

As previously stated, the noise projections included the noise reducing effects of topographical conditions and ground effects. For receivers R1 and R2, located west of the quarry, the shielding effects of the quarry wall and ground effects of dense foliage are assumed in the analysis. Similar topographical conditions and ground effects were also assumed for R3 and R4. R5 and R6 are located along the bay, and have similar ground effects, but less topographical shielding. Finally the receivers along Fritz Cove Road have some shielding from the walls of the site, but the noise propagation across the water was modeled as a hard site with minimal ground attenuation.

As described, the noise level projections were performed for the existing conditions and future conditions, 10 year in the future, when there will be additional shielding from the benching the quarry walls. The results of the noise levels projections are provided in Table 2. The table includes the distance from the quarry to the receivers along with the existing and future noise projections.

Receiver Number	Site Description ¹	Distance to Quarry ²	Existing Noise Levels ³	Future Noise Levels ⁴
R1	West of Site, near Ferry Terminal	4110	39	34
R2	West of Site, near Auke Nu Cove	3200	41	36
R3	East of Site, Oxford Street Area	740	55	48
R4	East of Site, residences north of Glacier Hwy	1000	52	45
R5	East of Site, Aukenu Dr Area	860	57	52
R6	East of Site, residences south of Glacier Hwy	1440	52	47
R7	Northwest waterfront, Fritz Cove Road Area, north	5800	59	57
R8	Northwest waterfront, Fritz Cove Road Area, central	6180	58	56
R9	Northwest waterfront, Fritz Cove Road Area, central	6570	58	56
R10	Northwest waterfront, Fritz Cove Road Area, south	7610	56	54

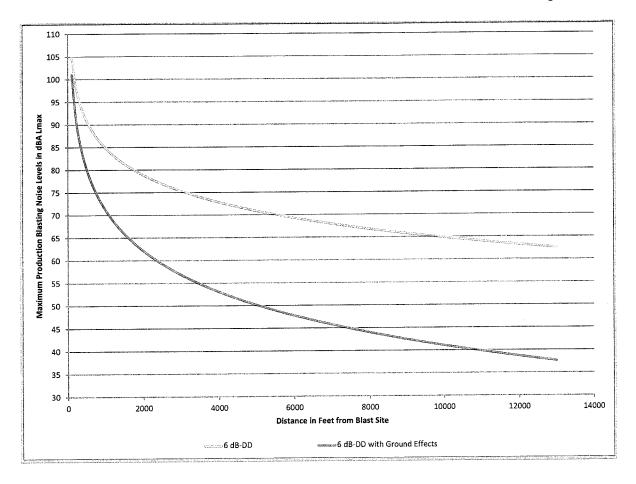
Note:

- 1. Noise modeling site are shown on Figure 3
- 2. Distance between the quarry and the receiver site
- 3. Existing noise levels in L_{max} dBA
- Future noise levels in L_{max} dBA

Noise levels projections ranged from 34 to 59 dBA L_{max} . The highest noise levels are actually located along Fritz Cove Road due to the efficient propagation of noise across the bay. The lowest levels are predicted to the west of the site due to the shielding effects of the quarry wall and dense foliage. There are no predicted noise levels the meet the 65 dBA L_{max} permit conditions, and therefore no noise impacts are predicted. Because these projections were performed using the worst case scenario the actual noise levels would be expected to be lower, and operations of the quarry are in compliance with the permit conditions.

Blasting Noise Projections

Production blast noise levels were predicted using a reference noise level of 105 dBA at 100 feet, which is a typical blast level for quarry operations. Production blasting at the Stabler Quarry is very intermittent, and infrequent. The number of production blasts per year depends on the needs of the contractor. Between January and November of 2010 there were ten production blasts, and in 2009 there were 14 production blasts. An average frequency of two production blasts per month through the construction season is likely typical, with fewer, if any, production blasts during the winter months. The Stabler Quarry is currently permitted to have production blasts between 10:00 AM and 12:00 Noon, or between 1:00 PM and 3:00 PM, Monday through Friday. Blasting is not allowed on weekends or nighttime hours. The vast majority of production blasts are in the afternoon, between 1:00 PM and 3:00 PM. Figure 4 is a graph of typical noise attenuation for blasting out to a distance of 2 miles from the site. The graph includes a standard reduction of 6 dB per-doubling of distance and a second that also includes ground effects, which is a more likely representation of the blast levels at large distances from the quarry. Blasting is not considered under the 65 dBA permit conditions.



Noise Mitigation Measures

Because the operational noise levels from the Stabler Quarry are all predicted to remain within the City and Borough of Juneau regulations for this land use, no noise mitigation measures are being recommended. The operational hours, limits on blasting and general design of the facility along with its location are all sufficient design measures to reduce noise levels to within the City and Borough of Juneau regulations.

Summary

Noise levels predicted using a worst case scenario ranged from 34 to 59 dBA L_{max} at residential area near the site. The noise projections are all within the permit conditions of 65 dBA L_{max} . Because the noise levels projections did not show any exceedance of the criteria, and the operational hours are only during daytime hours, no noise mitigation was proposed.

Appendix A:

References and Supporting Information

Beranek, Leo L. 1988. Noise and Vibration Control. Institute of Noise Control Engineering.

Juneau Area Wide Traffic Map, 2005 and 2006. Alaska Department of Transportation.

USDOT. 1977. Highway Construction Noise: Measurement, Prediction and Mitigation. U.S. Department of Transportation. Federal Highway Administration, Washington, DC.

STABLER QUARRY CONDITIONAL USE PERMIT, PUBLIC MEETING MAY 18, 2011

AUKE BAY ELEMENTARY SCHOOL LIBRARY, 7:00 PM

Please Sign In

ZAME:	E MAIL:
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From: Gallion, Irene [igallion@dowlhkm.com]

Sent: Tuesday, May 31, 2011 2:19 PM

To: Alan Steffert

Subject: FW: Comment on Stable Point

Follow Up Flag: Follow up

Flag Status: Red

From: Sheila Good [mailto:sheilas_good@yahoo.com]

Sent: Tuesday, May 31, 2011 2:14 PM

To: Gallion, Irene

Cc: james.papoi@alaska.gov **Subject:** Comment on Stable Point

Stabler Point Quarry Comments on proposed changes to hours of operation.

As a resident of Oxford Street since 2006, I would like to recommend the Stabler Point Rock Quarry hours of operation not be modified for the following reasons:

- 1- The Planning Commission Notice of Decision USE2008-00007 –Referencing The modification to the conditional use permit USE2001-00022 clearly denied extending the hours of operations. Compelling reasons for overturning this denial have not been supplied.
- 2- As the pit has increased in size, so has the noise and disturbance from the operations. I would like to see current noise reading taken before any expansion is even considered.
- 3- I do not believe that the contractors using the pit should be allowed to operate before 8:00 AM or on Saturday as they continually violate following existing permit conditions:
 - # 1- Unsecured loads are a common occurrence.
 - # 3- Have witnessed truck traffic after 4:30 PM as well as Saturdays.
 - #4- Have witnessed blasting occurring after 3:00 PM, the latest was the end of April.
 - #8- The operators do not obtain traffic control permits from DOT & PF, nor are they in the habit of following the ones that are provided for them.
 - #15- The road is littered with material from the pit and spilled from the trucks and no effort is put forth to clean it up.
 - #31- Contractors continually stage their crushers and lowboys along Glacier Highway even after multiple otifications of this violation.

If the contractors will not comply with the existing conditions how are we to expect they will comply with the extended hours conditions?

From: Gallion, Irene [igallion@dowlhkm.com]

Sent: Tuesday, May 31, 2011 8:23 AM

To: Alan Steffert

Subject: FW: FW: Stabler Point Quarry Comments due May 31

From: Tveten [mailto:rktveten@acsalaska.net]

Sent: Tuesday, May 31, 2011 8:19 AM

To: Gallion, Irene

Subject: Re: FW: Stabler Point Quarry Comments due May 31

On 5/27/2011 8:37 AM, Gallion, Irene wrote:

I had entered the e mail incorrectly on the first delivery, my apologies.

From: Gallion, Irene

Sent: Thursday, May 26, 2011 12:57 PM **To:** Gallion, Irene; Alan Steffert; Eric Feldt

Subject: Stabler Point Quarry Comments due May 31

Thank you for attending our informational meeting on May 18 for Stabler Quarry's conditional use permit application. **Just a reminder that we'd like comments to our office by May 31, 2011.** This will allow us to consider all concerns while preparing the permit application.

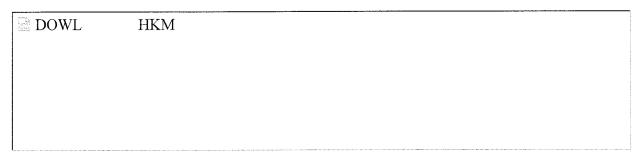
If you have misplaced your form, you can e mail comments to me, or can drop any written material off at DOWL HKM offices at 5368 Commercial Boulevard, right past Landscape Alaska if you are headed to Costco.

For those of you who have mailed in comments or dropped them by – thank you!

After we prepare the application we will submit it to planning, and they will schedule a hearing before the Planning Commission. We will let you know when we have a date for the Planning Commission hearing.

Irene M. Gallion

Planner



I would like to say a few words...

same as tourism, construction is seasonal. we trying to take advantage of daylight and weekends. I just want to be able to work the same hour.

I would like Stabler Point Quarry to be open from 7:00am-10:00pm, 7 days/week.

Thanks.

Stabler Point Quarry

Nearby Residents' Requests Concerning Time and Manner of Operation

- 1. (Top Priority) Please! Do not start quarry operations or allow trucks to rumble up the quarry road before eight o'clock in the morning! We live quite close to the quarry, are retired, and would be significantly disturbed by an earlier starting time!
- 2. Arrange for a convex mirror to be placed on Glacier Highway opposite the entrance to Oxford Street to allow our neighbors and us to see around the curve toward town. Over the years, even though we've tried hard to have our steep hill plowed and sanded when it has been slick, we've slid out into the highway from Oxford Street several times. Because of the curving Glacier Highway, neither can we see nor be seen far in either direction. One of the rock-hauling trucks could make short work of us and our little car.
- 3. A reasonable quitting time also is important to us. When we moved here ten years ago, this was a most peaceful location. Since that time, however, we have been subjected to almost constant rumble and banging from the quarry. It would seem reasonable for the quarry operators to allow the respite of quiet evenings and a peaceful weekend, i.e., both Saturday and Sunday.
- 4. For the safety of Auke Bay drivers, we'd appreciate prompt removal of rock that falls from the trucks.
- 5. When I mentioned that our house is quite shaken by each explosion, Mr. Steffert offered to monitor a blast from our home. We'd be grateful for that to be done.

Susanne and John d'Armand

Susanne d'Armand

Residence address:

3611 Spartan Street

Juneau, AK 99801

USPS address:

Post Office Box 210623

Auke Bay, AK 99821-0623

Telephone:

789-4956

Facsimile:

789-3981

Electronic mail:

ibd@gci.net

Comments on the Proposed Changes to Hours of Operation at the Stabler Point Quarry

We believe the hours of operation set by the Planning Commission three years ago when the quarry was expanded have worked well. Therefore, we DO support the extension of the Quarry permit for another ten years but we DO NOT do not support the proposed changes in operating hours for the following reasons:

The potential impact of quarry operations noise—primarily blasting, crushing, and loading rocks into the metal truck beds—on resident neighbors. When the quarry was expanded to three times its previous size, neighbors already affected were concerned about the potential for increased noise from additional crushers, and more loading and blasting. In response, the Planning Commission set the current hours to minimize the effects of the larger operation on residents and the permit was granted with little opposition.

Since that time notices have been posted near the quarry and on the Fritz Cove Road to alert residents and highway users of the days/hours when blasts can be expected and Borough staff and contractors have been responsive to resident questions and concerns. We believe the Commission's decision on the hours of operation has worked well—allowing contractors to get the rock they needed for Borough and other projects and giving residents predictable hours of respite from the noise of increased operation.

On weekdays when crushing and rock loading is taking place it is often difficult to hold a conversation in our front yard. Having Saturdays free from noise has allowed a day for gardening and other recreational uses and to plan outdoor social time with friends with friends and family. This has seemed to us a reasonable accommodation between private and commercial uses.

- Wider neighborhood impact of Saturday operation. The proposal to permit Saturday operation would also significantly increase the number of nearby residents that can be affected. Currently, neighbors who work 9 to 5 on weekdays are largely exempt from operation noise since they are not at home during the hours the quarry is in use. These people who may not have previously found the quarry affecting their lives very much have not been notified and so are largely unaware of this proposed change in opening times. If Saturday operations are allowed as part of the permit, they may be shocked to find that their yards and gardens are in an ongoing "construction zone" during much of the summer.
- 3) Rock hauling during rush hour at both ends of the day and on Saturday. The proposed new hours add an hour to the beginning and end of each weekday which would put large hauling trucks on the road during both rush hours. This would increase traffic risks on the only available route through that area on an already overused road. During the recent meeting with residents concern was expressed about rock chips and pieces flying off trucks onto the road. This concern also has been mentioned by other frequent users of the highway. It is difficult for the truck drivers to detect small rock loss. Though they are required to stop and pick up debris when they detect it this doesn't always occur. The additional traffic during rush hours would also increase the possibility of loose rock hitting windshields and make it even more difficult for truck drivers to stop and remove any that lands on the road.

Under the current hours, weekday traffic is lighter when most rock hauling occurs. On Saturday traffic increases significantly in both directions and is more constant throughout the day. Of particular concern would be conflict between trucks and boat owners attempting to gain access to

the marinas. Adding the competition of heavy trucks, to and from the quarry, to this mix does not seem appropriate, given that the highway is marginally adequate for its current level of use.

4) There is no evidence that increased hours are necessary. During the past few years construction has been consistently, perhaps even unusually, heavy and demand for rock from this location high. The large amount of rock used in the airport runway expansion project is a case in point. The quarry has obviously been able to supply the needed rock within the hours set by the Planning Commissions. Though Borough staff says it is difficult to predict how many projects will occur or how much rock will be needed in the future, the list of projects anticipated in the next few years does not provide reason to believe that it will exceed (or in some seasons possibly even equal) those of the past three years. The amount of rock needed is apparently fairly stable and only in unusual (and temporary) circumstances would the need exceed this amount. Therefore, an increase of almost 50 % in available hours for contractor convenience does not seem justified.

Since contractors use the quarry on an as-needed basis the demand for rock, though often heavy during the summer, is not consistent. Making more hours available for contractors does not mean that the quarry would necessarily see more use nor that the Borough would receive more money from its operation. However, it would definitely mean many more hours of noise and disturbance for neighbors (since a variety of contractors use the site). Once the hours are increased the Boro staff would have no way to limit use if demand lessened. A single user could decide to work Saturdays, for example, and neighbors would have no way to anticipate when, or how much, disturbance might occur. Increased hours might also involve more staffing cost since the Borough is required to closely monitor quarry operations.

5) In summary. We believe that locating a quarry in the middle of a mixed use district containing many residences (the majority predating the opening of Stabler's Point to replace the previous one on the NOAA site) should mean that everyone gives a little to achieve the best possible balance of competing interests. We are convinced that the present hours of operation are reasonable and appropriate and we would like to see them maintained as part of the permit. We feel especially strongly that the quarry should not be open on Saturdays. Neighbors should be able to anticipate those times when their yards would be quiet enough for private activity. We hope that the Commission will maintain consistency in hours of operation and not require residents to return every few years to defend them unless circumstances demonstrably and significantly change.

Karl and Vivian Hegg 2950 Fritz Cove Road Juneau, AK 99801 789-7311