

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON
ORDINANCE NO. 857

An Ordinance amending the Comprehensive Framework Plan Volume 1 Findings to include the Howard Canyon Reconciliation Report, as revised and amended by the Board, in fulfillment of the Periodic Review Work Program tasks for Statewide Planning Goal 5 resources in the Howard Canyon area..

Multnomah County Ordains as follows:

Section I. Findings.

(A) On September 22, 1994, the Multnomah County Board of Commissioners adopted Ordinance #798, which adopted the "Howard Canyon Reconciliation Report" as part of the Multnomah County Comprehensive Framework Plan.

(B) The "Howard Canyon Reconciliation Report" includes significance determinations, ESEE analyses, protection programs, and other requirements for implementing Goal 5 of the Oregon Statewide Planning Program specified in ORS 660-16 Division 33 in regards to three significant streams, Big Creek, Knierem Creek, and Howard Canyon Creek in the East of Sandy River rural area.

(C) On October 21, 1994, this ordinances were transmitted to the Oregon Department of Land Conservation and Development for their consideration in fulfilling the requirements of Periodic Review.

1 (D) On February 7, 1995, the Director of the Oregon Department of Land Conservation and
2 Development issued a report citing specific deficiencies in Multnomah County's submitted ordinance.

3
4 (E) On February 28, 1995, the Director of the Oregon Department of Land Conservation and
5 Development issued a supplemental report which, after considering Multnomah County's responses to
6 the issues raised in the February 7, 1995 report, maintained that the County's ordinance was deficient in
7 meeting the requirements of Periodic Review.

8
9 (F) Multnomah County agreed to postpone consideration of the Howard Canyon Reconciliation
10 Report by the Land Conservation and Development Commission in order to consider amendments
11 which would address the Oregon Land Conservation and Development Commission's objections to the
12 Report.

13
14 (G) As a result, Multnomah County adopted Ordinance No. 833 on September 7, 1995, which
15 amended the Howard Canyon Reconciliation Report in order to address the deficiencies identified by
16 the Department of Land Conservation and Development.

17
18 (H) On March 7, 1996, the Oregon Land Conservation and Development Commission
19 acknowledged the Howard Canyon Reconciliation Report as consistent with Statewide Planning Goal
20 5, except that the Commission directed a revision to the report to 1) add back the western-most 1,000
21 feet of the site into the area found to be a significant aggregate site, 2) remove language from the report
22 requiring periodic noise studies by conducted by the mine operator in order to verify compliance with
23 DEQ noise standards, and 3) remove language giving discretion to the County Engineer to make addi-
24 tions to the required traffic management plan studies associated with any request to remove aggregate
25 material from the site.

(i) As a result, Multnomah County must revise the Howard Canyon Reconciliation Report to reflect the Land Conservation and Development Commission's direction.

Section II Amendment of Framework Plan Text

Multnomah County Comprehensive Framework Plan Volume 1 Findings is hereby amended to include the changes to the Howard Canyon Reconciliation Report. These changes are shown in strike-out/underline form as Exhibit A, attached.

ADOPTED THIS 20th day of June, 1996, being the date of its second reading before the Board of County Commissioners of Multnomah County.



BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON


Beverly Stein, Chair

REVIEWED:

LAURENCE KRESSEL, COUNTY COUNSEL
MULTNOMAH COUNTY, OREGON



Sandra N. Duffy, Chief Assistant

EXHIBIT “A”

the Reconciliation Report development.

The last chapter of the "Reconciliation Report" is the "Conflict Resolution and Protection Program". This chapter reconciles conflicts between each Goal 5 resource and other uses and/or other Goal 5 resources. The chapter also reaches conclusions concerning the appropriate level of protection and suggests specific protection strategies. Subsection "B" discusses previously identified ESEE consequences for each conflicting use and reconciles any differences to reach conclusions concerning whether conflicting uses should be allowed. Subsection "C", "Resource Protection", determines the level of protection and discusses a protection program for each of the Goal 5 resources.

The "Reconciliation Report" is considered an amendment to the Multnomah Comprehensive Framework Plan. The "Reconciliation Reports" include both findings and policy recommendations. Policy recommendations will be incorporated into the Comprehensive Framework Plan by separate actions by the Multnomah County Planning Commission and Board of County Commissioners pursuant to the Multnomah County Code and state statutes. Also, some subsequent Planning Commission and Board actions may be required to implement the full set of strategies outlined in the protection programs.

The "Reconciliation Report" is intended to satisfy in part the requirements of the Land Conservation and Development Commission's Remand Order 93-RA-876 and satisfies all other statewide goal requirements of the county's work program approved by the Commission, WKPROG - 0038.

On October 21, 1994, Multnomah County transmitted the completed Reconciliation Report to the Department of Land Conservation and Development. The Department received one objection to the Howard Canyon Reconciliation Report, from an attorney representing the Howard Canyon Quarry. On February 7, 1995, the Director of the Department of Land Conservation & Development issued a report which found flaws in the Howard Canyon Reconciliation Report. In response to County and objector comments, the Director issued a revised report on February 28, 1995, which did not change the staff recommendation regarding the Howard Canyon Reconciliation Report.

~~The attached document contains revisions intended to respond to the objections raised by the Department of Land Conservation & Development to this report. It was adopted by the Multnomah County Board of Commissioners on September 7, 1995~~

In response to the Director's report, Multnomah County made changes to the Howard Canyon Reconciliation Report, in an effort to respond to the DLCD's criticisms. On September 7, 1995, the Multnomah County Board of Commissioners adopted a revised Howard Canyon Reconciliation Report. However, the attorney representing the Howard Canyon quarry filed seven objections to the County's revised document. After review, the Land Conservation and Development Commission concurred with two of these seven objections and, along with an additional minor change, directed Multnomah

County, on March 7, 1996, to make specific changes to the Howard Canyon Reconciliation Report related to the area of significance, monitoring of on-going noise issues, and County Engineer discretion. The attached document contains revisions which comply with the LCDC direction.

A. AGGREGATE RESOURCE SIGNIFICANCE DETERMINATION

1. BACKGROUND

This first portion of this revised analysis is the determination of significance. The procedure for this determination is given in Oregon Administrative Rules (OAR) 660-16-000 (1) through (5). The rule directs the local government to determine whether there is sufficient information on the location, quality and quantity of the resource at a particular site. Then, based on that evidence, the local government must decide if the site is significant. The County's Comprehensive Plan will then reflect that conclusion. The prior determination of significance for this site was adopted on March 27, 1990 and concluded that the Howard Canyon site was significant and the site was included in the significant (important) site inventory. The following significance determination report is a redraft ~~and review~~ of the 1990 analysis to more closely follow the administrative rule requirements ~~and more closely determine the proven area of the significant aggregate resource.~~

2. LOCATION

The potential aggregate resource identified by the property owner is a cleared ridge top which runs in an east-west orientation along the section line between Section 36, Township 1 North, Range 4 East and Section 1, T. 1 S., R. 4 E., WM. The resource is a Boring Lava Formation that comprises the ridge between Knieriem / Ross Creek on the north and Howard Canyon Creek on the south. The formation covers portions of tax lots 25, 71, and 13 in Section 36 and tax lots 16, 17, 2 and 1 in Section 1.

The extent of the potential resource is shown on a map submitted by the property owner and confirmed by 31 test pits dug by both the property owner and the consulting firm of H. G. Schlicker & Associates, Geologists and Engineers. Maps in this Goal 5 report have been prepared by County staff, but are based upon the map submitted by the property owner. The location of the test pits are shown on the property owner's map and on a map in the appendix of a January 9, 1989 report entitled "Geologic Reconnaissance, Howard Canyon Quarry, East Multnomah County, Oregon," Project #88-416, prepared by H.G. Schlicker & Associates, Inc., Geologists and Engineers, 235 NE 122nd Avenue, Suite 315 [now 300], Portland, Oregon, 97230. ~~Unfortunately, the test pit sites on these two maps do not match.~~ The 22 page Schlicker report is incorporated in its entirety by reference as findings. That report did not map the boundary of the resource, only the location of the test pits. The westernmost test pit, as shown on the Schlicker report test pit map, is actually about 1000 feet from the western boundary of the resource as drawn on the property owner's map, ~~which shows the western most test pit to be approximately 1,300 feet from the western boundary of the resource.~~ Except for the exact westerly extent of the resource, Multnomah County accepts and believes the aggregate resource location information cited ~~although the test pit sites on the two maps do not match, they cover the same general areas.~~ However, lacking any conflicting information, the property owner's boundary will be used for this Goal 5 analysis. ~~the western boundary of the proven aggregate resource is approximately 1,000 feet easterly of the potential resource boundary claimed by the property owner.~~

3. QUANTITY

On page three of the January 9, 1989 Schlicker report it reads:

Quantity

The basalt occupies the upper 50 feet or more of the ridge crest except for the thin Loess overburden. The ridge rock deposit is more than 4200 feet long and 350 feet wide and contains at least 33 acres of ground. The volume of rock in place is then $(4200' \times 350' \times 40') / 27 = 2,177,778$ cu yards. When rock is crushed it expands about 25% therefore the deposit will produce more than 2.7 million tons of crushed basalt.

Because the lava is believed to occupy an old stream valley and the center of the valley should be much deeper, the deposit should be thicker than it appears and an estimate of an additional 30% of rock is not unreasonable. This additional rock would bring the total to 3.5 million tons. ...

On page one of the same report it was stated that the 31 test pits that were dug showed that, on average, there was a little over seven feet of overburden on top of the rock. The top two feet of the rock is highly weathered and is considered to also be overburden (page three). These two depths are conservatively added together to total ten feet of overburden.

At the time of the Schlicker report there had not been any drillings to determine the depth of the resource. However, from the rock exposures in the existing quarry face and the geologic knowledge of this formation there is confidence in the continuity of the resource depth across the ridgetop.

The above cited DOGAMI on-site inspection report of December 8, 1986 notes that at that time of the inspection the DOGAMI Reclamationist also believed the layer of hard rock to be approximately 40 feet thick. The report is incorporated by reference as findings.

Multnomah County accepts the above as sufficient findings in determining the quantity of aggregate material at the resource site. ~~However, the stated length of the resource site in the Schlicker Report (more than 4,200 feet) is less than the scaled length of the resource site as shown on the property owner's map (approximately 5,200 feet). This difference of 1,000 feet corresponds to the 1,000 foot differential between the most westerly test pit and the western boundary of the resource site as shown on the property owner's map. Therefore, it appears that the Schlicker report did not consider this additional 1,000 feet in their calculations of resource quantity.~~

There is only one other aggregate site in unincorporated Multnomah County for which there is sufficient information on quantity to meet Goal 5 OAR requirements. That site is the Angell Brothers Quarry which is located west of the City of Portland. Angell Brothers is estimated to contain approximately 220 million cubic yards of very good aggregate material

depleted and converted to other land uses); 15.5 - 23.3 percent for rock from Rogers Construction; and no information for rock from Gresham Sand and Gravel.

The quality of the aggregate from the Howard Canyon site is less than the one other site in unincorporated Multnomah County and is less than the closest sites in the City of Gresham. However, the Howard Canyon resource is significant when the following is considered: the aggregate does meet the State of Oregon Highway Department wear requirements, the site is the only one in unincorporated East Multnomah County with sufficient known information on quality of the resource, and there is some uncertainty regarding future production potential from the City of Gresham sites.

5. SIGNIFICANCE CONCLUSIONS

~~Most of t~~This site is a significant Goal 5 Mineral and Aggregate resource site based upon the above description of the location, quantity and quality. ~~However, the area of the site west of the most westerly test pit, located approximately 1,000 feet east of the western boundary of the resource on the property owner's map, is found to be not significant, due to lack of information in the Schlicker Report and from the property owner about the resource in this area.~~

B. AGGREGATE RESOURCE ANALYSIS

1. DESCRIPTION OF THE RESOURCE

a. Summary of Statewide Planning Goal 5 Administrative Rules

Goal 5 requires local governments to inventory certain natural resources and develop programs to protect the resources that are determined to be significant. The Howard Canyon aggregate resource was determined to be significant in the preceding section A "Significance Determination." This Resource Analysis section is the second portion of the revised Goal 5 work on the Howard Canyon aggregate resource. The requirements for this analysis are given in OAR 660-16-005 and 660-16-010. An additional guide in the process is a May, 1990 technical bulletin entitled "Planning for Mineral and Aggregate Resources Under Statewide Planning Goal 5" by the Oregon Department of Land Conservation and Development (DLCD).

This section will address the part of the administrative rules which direct the local government to: (1) identify land uses which would conflict with the resource, (2) analyze the economic, social, environmental, and energy consequences of allowing, limiting or prohibiting the mining and the conflicting uses, and (3) determine the level of protection for the resource. The last task, the determination of the level of protection will not be fully resolved in this section B, but will be concluded in Chapter IV which will also include other Goal 5 resources.

b. Site Description

This aggregate resource is a cleared ridge top which runs in an east-west orientation along the section line between Section 36, Township 1 North, Range 4 East and Section 1, T. 1 S., R. 4 E., WM. The resource is a Boring Lava Formation that comprises the ridge between the canyons of Big Creek and Knieriem/Ross Creek on the north and Howard Canyon on the south. The formation covers portions of tax lots 25, 71, and 13 in Section 36 and tax lots 16, 17, 2 and 1 in Section 1. The extent of the resource is shown on a map submitted by the property owner ~~(except for the western-most 1,000 feet of length as shown on that map)~~ and confirmed by 31 test pits dug by the applicant and the consulting firm of H. G. Schlicker & Associates, Geologists and Engineers.

The geologic process that resulted in this ridge top formation occurred from basalt lava pouring from boring vents into and filling stream valleys that existed about 2 million years ago. Since that time streams have cut new channels and valleys into the softer "Troutdale Formation" that is between the lava filled valleys. As a result, the former valleys are today's ridge tops.¹

The basalt lava resource occupies the upper 50 feet or more of the ridge crest and is more than 350 feet in width. The width of the entire ridge is approximately 700 feet and the ground surface ranges from 780 feet to 860 feet in elevation. Access to the resource area is by two private drives, one connecting with Knieriem Road on the north side of the ridge and one connecting with Howard Road on the south side.

c. Existing and Anticipated Mining Activities

- (i) Existing Mining Activities. The following description of the existing mining activities at the Howard Canyon site is from a site inspection report written by Allen H. Throop, Reclamationist with the Oregon Department of Geology and Mineral Industries (DOGAMI):

This inspection was conducted to determine if this site remains qualified for a Grant of Total Exemption. The total exemption remains valid until such time as commercial production exceeds 5,000 cubic yards per year.

... The site was active at the time of the visit. Two locations are being worked. The biggest disturbance is a two-acre area near the north-east corner of Section 1. Approximately one acre is an extraction area of diced basalt. The other acre has been used to store overburden which has been stripped off of the basalt. Mr. Muck was ripping some of this basalt for later crushing at the time of this visit. According to the owner and operator, most of the crushed material is used on-site for the logging road construction on contiguous parcels owned or being logged by Mr. Muck. Such production is exempt from the 5,000 yard limit under on-site construction exemption.

The second site being actively mined is an outcrop of columnar basalt

this operation as it is a hilltop removal project. ...

The rock deposit should be easy to reclaim providing the topsoil resource is properly stored and then replaced over the mine area. Once an adequate area is opened up for mining, which will be approximately five acres, topsoil stripped from the expansion areas will be directly reapplied to the mined out pit.⁴

2. IMPACT AREA

Identification of an impact area surrounding the resource is required by OAR 660-16-000(2). The impact area is the area in which specific conflicting uses may adversely affect the resource. However, aggregate resources, which are "protected" for eventual extraction, are different from other Goal 5 resources in this part of the analysis. Not only must the impact area include an area that includes uses that could adversely affect the resource, but the impact area must also encompass those land uses which could be affected by the presence of the aggregate resource (expected extraction activities).

The description of the impact area for this resource falls into two categories. The first impact area is a mapped distance surrounding the entire known aggregate resource. The second impact area is a description of specific points and segments in the transportation network of East Multnomah County.

a. Impact Area Description

In the process of mapping an impact area for an aggregate resource a very important consideration must be in the forefront: the larger the area, the more properties that will receive restrictions on future permitted future land uses if the aggregate site is, in the later stages of the Goal 5 analysis, determined to meet the standards for protection. Therefore, an impact area that extends farther than the distance in which conflicts will actually occur, results in unnecessary development restriction on some property owners.

Noise, dust, and blasting associated with extraction and processing of aggregate resources may adversely affect surrounding land uses. Conversely, complaints expressed by surrounding property owners about those effects, as well as complaints about visual concerns and traffic may influence how aggregate is mined. In addition, there are Goal 5 inventoried "Significant Streams" to the north and south of the subject aggregate resource for which extraction and processing activities may conflict. To address these potential impacts, Multnomah County believes that an impact area of 1,200 feet is appropriate.

A noise assessment study of this site, prepared for the aggregate property owner, has been submitted to the County. A map of the area surveyed as part of the noise analysis is shown on Page III-49 (it is Figure 2 in the original noise analysis report). As indicated by the map, the noise analysis did not consider impacts from mining on the western-most 1,000 feet of the proposed aggregate site. At seven different distant locations, predictions of noise levels were made based upon the mining equipment located in the center of the

resource on both the north and south sides. Typical mining equipment sound levels used in the test were those for a dozer, front end loader, jaw crusher, screens, cone crusher, and generator set. At receiver point number 4 the sound level, without any mitigation methods such as berms, exceeded the DEQ noise standard. At receiver point number 5 the sound levels, again without berms, did not exceed the DEQ noise standard.⁵ Using the scale shown on a map within the report, County staff has estimated that the distances between the noise source and the receiving points were about 1,000 feet for number 4 and about 1,200 feet for number 5. The 1,200 foot distance is thus determined to be valid estimate of the range of noise conflicts because it is the distance in which DEQ standards could be met without berms – a distance greater than necessary if berms were in place. Noise from blasting was addressed in a subsequent March 13, 1990 addendum to the February 19, 1990 noise study by the same consultant. The report concluded:

We have found at other quarry sites similar in layout to that at Howard Canyon that blasting related sound can be reduced effectively by using berms. If a berm were located around the initial start-up area to barrier residences to the south, blasting noise could be reduced to meet DEQ standards at all residences. Once the quarry operation is moved into the mountain, the natural barrier provided by the rock formation will be adequate to insure DEQ standards are met at all residences without the need for a man-made barrier.

State DEQ noise standards do not apply to trucks engaged in interstate commerce but would apply to trucks and equipment that were permanently on-site during extraction and processing activity. For a further justification of the impact area chosen see section C.2.b.

The 1,200 foot distance also includes the drainages from the aggregate resource area down to the Howard Canyon Creek, Big Creek, and Knieriem/Ross Creeks. ~~These creeks flow into Big Creek.~~ The 1,200 foot distance includes all three ~~the two upper creeks~~ at least in part. The stream lengths that fall within the impact area are sufficient to address all conflicts that could occur between the aggregate resource and the stream resources – any erosion problem into one portion of the stream is also a conflict downstream.

There is confidence that the chosen distance is a reasonable balance between resolving potential conflicts and not burdening more property owners than necessary with additional land use regulations. The difference in elevation of the resource and the surrounding lands could result in extraction activities, over time, to progress into the ridge to where they would take place in a modified "bowl" below the ridge top. In this situation, impacts associated with noise, dust, blasting, and visibility of the operation would be lessened for surrounding properties.

b. Area Road Limitations on Resource Protection

(iii.)Traffic Volumes: Multnomah County has no information on existing traffic volumes for Knieriem, Howard, or Littlepage Roads in the vicinity of the proposed mine. Local roads are designed to carry up to 2,000 trips per day (1,000 per lane) at an acceptable level of service. They are not intended to carry heavy commercial traffic. Evans Road and Gordon Creek road to the west of the site are rural collectors, with a capacity of up to 6,000 trips per day (3,000 per lane) at an acceptable level of service. Recent traffic counts for Gordon Creek Road south of Rickert Road show 800 trips per day. Recent traffic counts for Evans Road south of Pounder Road show 370 trips per day.

In conclusion, the following problems exist regarding area roadways surrounding the Howard Canyon quarry site:

- (i.) Access to the quarry site are from local roads which are not designed to carry significant amounts of commercial traffic. Since these roads run through areas designated for Commercial Forest Use, they do contain intermittent levels of commercial forestry traffic. However, the proposed quarry would most likely result in a much higher and more consistent level of commercial traffic.
- (ii.) Existing traffic counts on adjacent local roads are unknown (however, given traffic counts on nearby rural collector roads, it appears that these local roads are not operating at or near their capacity for traffic).
- (iii.) Knieriem Road and part of Littlepage Road are designated bikeway routes. Significant commercial truck traffic could pose problems for bicyclists on these roadways since existing improvements are inadequate.
- (iv.) Existing structural sections on adjacent local roadways appear to be inadequate to handle projected amounts of commercial truck traffic.
- (v.) Significant constraints for commercial truck traffic exist on bridges and viaducts exiting the rural community East of the Sandy River.

3. CONFLICTING USES

The Goal 5 Rule requires identification of conflicting uses. A conflicting use is one which, if allowed, could adversely affect a Goal 5 resource site. Identifying conflicting uses is primarily done by examining uses authorized by zoning districts within the impact area.

There are two zoning districts within the impact area (the resource site plus a 1,200 foot deep perimeter area): Commercial Forest Use (CFU) and Exclusive Farm Use (EFU). The CFU zoned portion covers approximately five-sixths ~~nine-tenths~~ of the total impact area with EFU zoning on the remainder. Both zoning districts require a minimum parcel size of 80 acres for the creation of new parcels.

- (i) CFU District. The following uses allowed by the Commercial Forest Use district within the impact area may conflict with or be impacted by mining activities on the resource site:

- Residential uses including the following as provided by the Administrative Rules:

Forestland dwellings

Alteration, restoration or replacement of a lawfully established dwelling

A mobile home in conjunction with an existing dwelling as a temporary use for the term of a hardship suffered by the existing resident or a relative

Private accommodations for fishing occupied on a temporary basis

Private seasonal accommodations for fee hunting operations

Residences are defined by the Oregon Department of Environmental Quality (DEQ) as "noise sensitive property." OAR 340-35-015(38) reads:

"Noise Sensitive Property" means real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.

In the CFU zoned portion of the impact area there are six existing residences and one unexpired approval for a residence. The closest residences to the aggregate resource are two houses north of the west end of the resource. The two houses are approximately 400 and 500 feet away from the aggregate resource and are located along the private access drive connecting to Knieriem Road.

The CFU zoned portion of the impact area covers portions or all of ~~thirteen~~ sixteen different tax lots that do not contain a dwelling. More than one-half of those tax lots are under the same ownership. Under the OAR provisions adopted by LCDC on February 18, 1994, only one dwelling is allowed per "tract." A "tract" means all contiguous parcels under the same ownership. There appears to be a maximum potential for seven more houses. The more realistic estimate may actually be only four more houses when considering the various new OAR approval criteria. Regardless, the existing and potential residential uses both impact and are impacted by aggregate extraction activities.

- (ii) EFU District.

- Residential uses including the following as provided by the Administrative Rules:

Dwelling customarily provided in conjunction with farm use

A dwelling on property used for farm use occupied by relative whose assistance in management of the farm is required by farm operator

One single-family dwelling on a lawfully created lot or parcel (optional provision using date of ownership, soil productivity ratings, and other criteria)
A mobile home in conjunction with an existing dwelling as a temporary use for the term of a hardship suffered by the existing resident or a relative
Single family residential dwelling, not provided in conjunction with farm use
Seasonal farmworker housing as defined in ORS 197.675
Alteration, restoration or replacement of a lawfully established dwelling

All of the above residential uses are "noise sensitive property" [OAR 340-35-015(38)]. In the EFU zoned portion of the impact area there ~~is one~~ are five existing residences. ~~Three~~ closest residence is approximately 850 feet away from the aggregate resource.

There ~~is one~~ are two tax lots within the EFU zoned portion of the impact area that do not contain a residence. The existing and potential residential uses both impact and are impacted by aggregate extraction activities.

e. Other Goal 5 Resources

The following Goal 5 resources are within the impact area:

(i.) Big Creek

(ii) Knieriem/Ross Creek

(iii) Howard Canyon Creek

These inventoried significant Goal 5 streams are within the impact area. Harm to fish habitat could result if there was inadequate soil erosion control measures associated with mining activities because drainages from the ridgetop aggregate resource location flow to the north and west into the Big and Knieriem/Ross Creek and to the south into the Howard Canyon Creek. Consequently, extraction activities are considered to be a conflict with these Goal 5 resources.

4. ESEE ANALYSIS

OAR 660-16-005 (2) Determine the Economic, Social, Environmental, and Energy Consequences: If conflicting uses are identified, the economic, social, environmental and energy consequences of the conflicting uses must be determined. Both the impacts on the resource site and on the conflicting use must be considered in analyzing the ESEE consequences. The applicability and requirements of other Statewide Planning Goals must also be considered, where appropriate, at this stage of the process. A determination of the ESEE consequences of identified conflicting uses is adequate if it enables a jurisdiction to provide reasons to explain why decisions are made for specific sites.

resulting economic effect will also be higher costs for this material for most of the unincorporated East Multnomah County.

- Big Knieriem/Ross and Howard Canyon Creeks

If the interpretation of "fully allowed" for these conflicting significant Goal 5 resources was "zero tolerance" of any adverse drainage impacts from an extraction operation, then the resulting economic effect on the aggregate resource would most likely be total prohibition of extraction activities. This concept is, however, unrealistic and improperly selective in not considering that several other land uses along the creeks such as forestry and farming practices, and residentially associated activities, like runoff from driveways, contribute some amount of erosion into the waters entering the creeks.

Staff from the Department of Geology and Mineral Industries and the Department of Environmental Quality have verified that they are confident that there is enough separation between the extraction area and these significant Goal 5 streams to accommodate holding ponds that would catch enough soil to ensure that the drainage that leaves the ponds would meet applicable water quality control standards.

The resulting economic effect of "zero tolerance" or severely strict erosion control standards would be the same as found in (a) above.

(ii) Economic Effect on Conflicting Uses if Development of the Aggregate Resource is Fully Allowed

- Residential Uses

During public hearings in 1990 there were strong opinions expressed by several property owners near this aggregate site that the value of their homes would be reduced due to operation of the quarry so close to their property. Also, on record in the County Planning Offices are letters from four property owners on Howard Road within the 1,200 foot impact area who commented on the property value issue. In each of the four letters the property owner stated that they have "no doubt" that "definite" and "significant" reduction in property values will result from extraction and rock transport activities. The basis for the residents concerns were primarily about the noise and dust from a mining operation and noise and safety concerns about truck traffic passing their properties on the inadequately improved Howard Road.

Even though the property owners were sincere in their feeling that the resale value of their homes would be significantly affected, there exists no convincing evidence in support of that position (ie. studies, reduction in appraised valuation or Board of Equalization petitions). See LCDC Remand Order Issue #2 and section C.2.h. of this chapter. In addition to the evidence requirement in Remand

important to Multnomah County.

A protection program to allow full development of the aggregate resource may have the economic effect of prohibiting new residential uses to be built over or near the resource area and require new residences in the impact area to assume a portion of the obligation to mitigate conflicts. Mitigating surface mining impacts typically involves building design and orientation considerations, sound insulation, and visual and noise screening. The costs of such measures will impact the builder of a new home in the impact area.

- Big, Knieriem/Ross and Howard Canyon Creeks

The County has no knowledge of any adverse economic impact that a mineral extraction operation would have on these streams if all extraction and processing activities met State operational requirements.

b. Social Effects

(i) Social Effect on Use of the Aggregate Resource if Conflicting Uses are Fully Allowed

- Residential Uses

The addition of approximately nine new residences in the impact area would increase the potential for complaints to the mining operator regarding noise, dust, vibration, etc. (The number of potential residences cannot be definite because of the complexity of the new OAR's for farm and forest lands; the potential may actually be fewer.) If the new residences were located on top of or too near the aggregate resource the result would either be severe modification of mining operations or outright prohibition of mining.

- Big, Knieriem/Ross and Howard Canyon Creeks

Any mining must be conducted in a manner that does not impact these Significant Goal 5 resources.

(ii) Social Effect on Conflicting Uses if Development of the Aggregate Resource is Fully Allowed

- Residential Uses

For the ~~six~~ dozen existing residences in the impact area the social consequences resulting from full development could be a perceived reduction in the quality of home life from any noise and dust produced during mining operating hours.

Registered Professional Engineer (acoustical) Mr. Standlee has determined that noise from blasting, machinery and rock crushing will be well within DEQ standards as measured at existing dwellings in the area.. Mr. Standlee's testimony was contracted for by the aggregate operator. The County-accepts the State of Oregon DEQ standards as providing an appropriate basis for determining whether or not noise is an adverse social impact. DEQ has established noise standards which are measured at the point of reception and, therefore, we conclude they are designed to protect adjacent properties. It is understood that DEQ standards are designed to meet the legislative policy to protect the health, safety and welfare of Oregon citizens. Because DEQ standards will be met by the proposed use at the quarry, it is concluded that social impacts of the resource are minimal on the conflicting use.

Crushing equipment previously used at the site has a DEQ air contaminant discharge permit which requires the crushing machinery to control dust. DEQ permit limits are designed to protect the health, safety and welfare of the citizens of Oregon and, therefore, it is concluded that DEQ standards present an appropriate basis for determining whether the impact would have an adverse effect on the conflicting use.

Dust can be expected to be produced from aggregate truck traffic on either of the long unpaved private access drives that connect the public road and the resource site. To ensure minimal dust effects on homes in the impact area, concerns regarding truck traffic speed limits on the drive and the type of driveway improvements would be appropriate issues to address in developing any operational standards for the site. Measures, such as retention of vegetative buffers, and watering, oiling, or paving the private drive that is used are options to be considered to minimize dust.

The County received testimony from adjacent residents expressing concern about the adequate enforcement of noise and dust standards, and the ability or willingness of the mine operator to obey such standards. Therefore, an effective enforcement program to ensure that noise and dust standards are met by the quarry operation is important to Multnomah County.

The social effect on new residential uses in the impact area if the aggregate resource is developed fully would also include the above discussion. In addition, the new residences, under full resource use (protection), may not be permitted to build and live at this location at all or at least will have fewer choices on home location, orientation, design, and views.

- Big Knieriem/Ross and Howard Canyon Creeks

There may be some social perception that the "natural state" of the stream is compromised by noise arriving from extraction and processing activities, but that noise, at expected levels, will have no impact on fish habitat.

c. Environmental Effects

(i) Environmental Effect on Use of the Aggregate Resource if Conflicting Uses are Fully Allowed

- **Residential Uses**

The addition of approximately nine new residences in the impact area, if sited in a manner that causes the quarry to violate noise control standards, would force a mining operator to either make severe modifications in mining operations or would result in an outright prohibition of mining. The result of these situations are discussed above as economic consequences.

- **Big. Knieriem/Ross and Howard Canyon Creeks**

"Allowing fully" these Significant Goal 5 creeks is accepted to mean maintaining the attributes of the creeks that qualified them as "Class 1 waters" as defined in the State Forest Practices Act. The effect on the aggregate resource is the requirement to put operational measures in place to ensure the fish habitat will not be adversely affected. Multnomah County can request that mining operation plans at the application stage with DOGAMI also be reviewed by other state agencies such as the Oregon Fish and Wildlife.

(ii) Environmental Effect on Conflicting Uses if Development of the Aggregate Resource is Fully Allowed

- **Residential Uses**

Fully allowing development of the mineral resource could result in increased noise, dust and vibration. The majority of the existing conflicting residential uses that would experience these effects are located at the western end of the resource site. Such development, however, would have to be conducted in compliance with environmental control standards. The consequences of those effects are discussed above as social issues. No adverse environmental impacts, that cannot be operationally mitigated, are foreseen.

- **Big. Knieriem/Ross and Howard Canyon Creeks**

There would be no adverse environmental effect on the creeks to the south, west, and north of the aggregate resource by an "allowed fully" mining activity if the mining were conducted under current state environmental control measures. The larger the mining extraction activities occurring at one time, the more difficult it would be to meet those environmental standards. Based upon submitted expert testimony there is confidence that mining at this site, at least at a rate of

county, or locations in the county where material is transshipped from outside the county. These longer distance deliveries use additional energy that would not be consumed if material was available from the Howard Canyon resource.

- Big, Knieriem/Ross, and Howard Canyon Creeks

Energy effects of allowing fully (protection) these creeks will be the energy the operator will expend in meeting State DEQ water quality and erosion standards.

(ii) Energy Effect on Conflicting Uses if Development of the Aggregate Resource is Fully Allowed

- Residential Uses

Operation of the aggregate resource on the site is not expected to increase or decrease energy consumption for existing residential uses.

Allowing full development of the aggregate resource, besides prohibit some homes from occurring, could require new homes that are approved to expend energy in constructing buffering measures such as earthen berms or require more energy in the need for additional sound insulation in the construction of the home.

- Big, KnieriemRoss, and Howard Canyon Creeks

No energy effects are foreseen.

e. Other Applicable Statewide Planning Goals

OAR 660-16-005(2): " ... The applicability and requirements of other Statewide Planning Goals must also be considered, where appropriate, at this stage of the process. ..." The following additional Statewide Planning Goals apply to this ESEE analysis:

(i) Goal 3 – Agricultural Land

Goal 3 applies to those lands zoned Exclusive Farm Use: Tax lots 16 and 43, Section 1, T. 1 S., R. 4 E.; and tax lots 1, 51, 55, 60, 61, 63, and 64, Section 2, T. 1 S., R. 4 E., WM. Only tax lot 16 in Section 1, on which a small portion of the aggregate resource is mapped, is of sizable acreage (34 acres). All of the other tax lots range in area from 4 to 8 acres and can not be expected to be any more than part-time farm endeavors by the property owners.

Counties may authorize those nonfarm uses defined by commission rule that will not have significant adverse effects on accepted farm or forest practices. The review standards for aggregate mining are given in OAR 660-33-130(5)(a)&(b). Mining

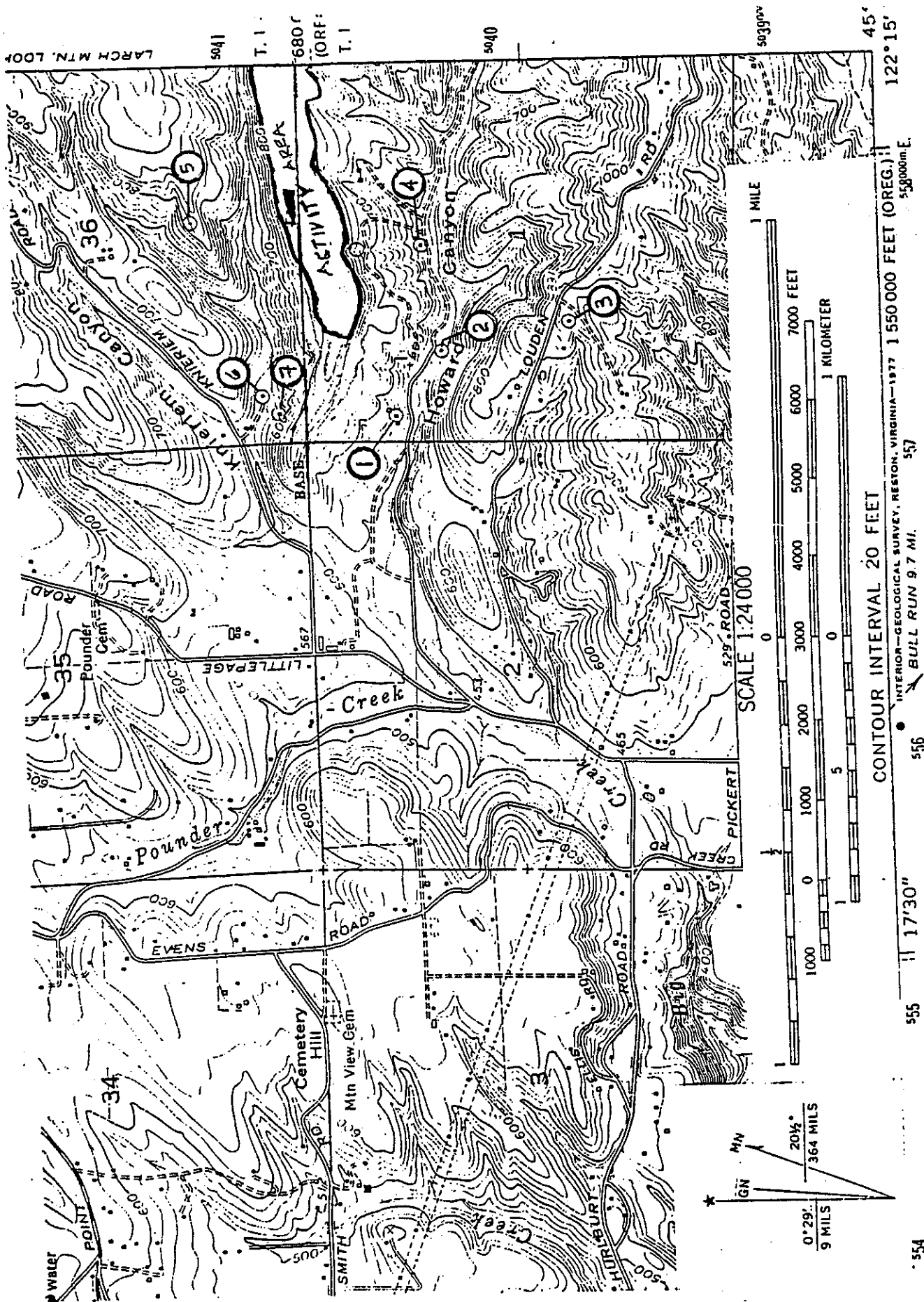


Figure 2
Vicinity Map

- Parks, including Private parks, playgrounds, hunting and fishing preserves and campgrounds and Parks, playgrounds or community centers owned and operated by a governmental agency or a nonprofit community organization
- A winery as described in ORS 215.452

d. Program to Achieve the Goal – OAR 660-16-010 requires, based on the determination of the economic, social, environmental and energy consequences, that a jurisdiction must "develop a program to achieve the Goal." Following is the program for protection of the Howard Canyon aggregate resource in accordance with the determination to "Limit Conflicting Uses" (3C level of resource protection).

- (i) Comprehensive Framework Plan Policy 16-B and the Zoning Code shall be amended to include items required by the LCDC Remand Order.
- (ii) Multnomah County shall amend Comprehensive Framework Plan Policy 16-B to identify the Howard Canyon aggregate resource as 3C and acknowledge the impact area identified in the ESEE Analysis as the appropriate area for regulation of conflicting uses. All of the following quarry development conditions shall also be made a part of the Plan Policy language specific to this site and shall supercede corresponding less restrictive provisions in the Zoning Code (MCC 11.15).
- (iii) A mapped plan designation and overlay zoning district "extraction zone" shall be adopted to protect the aggregate resource area that is appropriate to mine. Within this area only aggregate extraction and processing, land reclamation, farming and forestry activities would be permitted.

The extraction area for the Howard Canyon site shall be the mapped area of the aggregate resource ~~(note—this does not include the westerly 1,000 feet of the area shown on the applicant's map of the resource, since this area was found not to be significant in Chapter III).~~

- (iv) A plan designation and overlay zoning district "impact area" extending 1,200 feet around the "extraction zone" shall be adopted. Within the "impact area" overlay zone some future conflicting uses would not be allowed and other conflicting uses such as new homes would be required to address certain setbacks and orientation requirements so as not to cause approved mining activities within the "extraction zone" to violate State standards for noise levels, air quality, etc.
- (v) For the area of the aggregate resource site subject to an Oregon Department of Geology and Mineral Industries (DOGAMI) operational permit, Multnomah County deems Oregon Department of Environmental Quality (DEQ) standards for noise levels, air quality, and water quality to be appropriate to protect the health, safety and welfare of citizens and to be appropriate to protect the land and water resources within the impact area. The County will request participation by DEQ and the Oregon Department of Fish and Wildlife in the review of any DOGAMI operational min-

ing permit at this site. No nonexempt mining operation shall commence without DOGAMI approval of the proposed permit, after incorporating the comments and conditions suggested by DEQ and ODF&W in their review.

(vi) Phasing. At the Conditional Use review and approval of any proposed mining plan for this site the Approval Authority shall establish conditions of phased development in the amount of aggregate extracted within certain time periods. Multnomah County shall not require the number of phases between the start of mining and the eventual production cap proposed by the applicant to be greater than four. The timing between phases and the amount of aggregate extracted are directly related to the factors listed in program requirements, (vi), (vii), and (xvi).

- All of the nearby roads and the roads serving the aggregate site are rural local roads that are inadequate in construction for certain levels of heavy truck service. [See III.B.2.b. and III.B.4.e.(vii).] The ability of the roads to safely handle certain numbers and weights of trucks will directly determine the extraction limits of each phase. The findings of the Traffic Management Plan outlined in (xvi) and subsequent review and findings of the County Engineer will be the basis for the necessary information to establish the phase limits.
- ~~The Oregon Department of Environmental Quality no longer contains noise enforcement staff and, therefore, before approval of an increase to the next higher extraction total it shall be demonstrated that DEQ noise standards are satisfied at the existing extraction level allowed by the approved phase. The studies shall be by an independent consultant and paid for by the mine operator. The mine operator and the Planning Director shall agree on the cost and scope of the studies and the Planning Director shall select the consultant. In the event that the Planning Director and the mine operator do not agree on the cost and scope of the studies, the Planning Director shall make this determination. After the approval of the phase with the highest extraction total noise studies shall be conducted on an annual basis until, based upon the mining plan approved as part of the conditional use permit, intervening topography precludes the need for any further noise mitigation measures. If DEQ hires noise enforcement staff and informs the Planning Director that its staff will be able to effectively monitor noise levels at the quarry site, then the County shall discontinue separate noise studies. If mining is conducted on the portion of the site studied for noise impacts as part of the Daly-Standlee Report (see map on Page III-49) in a manner which is consistent with the manner described in the report, then no further noise analysis is necessary. For the portion of the site not considered in the Daly-Standlee Report (approximately the western 1,000 feet of the site), the mining applicant shall demonstrate through a noise study that mining in this area can meet DEQ standards for noise levels prior to approval of the Conditional Use application which allows mining activities in this area.~~
- Drainage from this hilltop aggregate site flows into Goal 5 Significant Streams which all flow into the highest rated Goal 5 Significant River, the Sandy River.

tions:

- A. Multnomah County Department of Environmental Services Rules for Street Standards
 - B. AASHTO Policy on Geometric Design of Highways and Streets
 - C. AASHTO Guide for Design of Pavement Structures
 - D. AASHTO Standard Specifications for Highway Bridges and Manual for Maintenance Inspections of Bridges
 - E. AASHTO Guide for the Development of Bicycle Facilities
 - F. ODOT Standard Specifications for Highway Construction
 - G. FHWA and OR Supplement Manual on Uniform Traffic Control Devices
- II. The consultant shall perform the following studies and produce preliminary and final engineering, design, and economy reports that show the results of data collection, provide roadway system characteristics, information, and factors, analyze and evaluate the effects of the proposed resource development on County Roads, and identify recommended improvements and relative cost responsibilities to accommodate local and resource development traffic. The report outline below is considered a guide; revisions to the plan may be necessary. The reports will be submitted to the County Engineer for review and approval. At a minimum, the reports must have the following components:
- A. Traffic Study Section
 - 1. Collect field data of existing traffic conditions;
 - 2. Provide physical and operating characteristics of vehicles attending the resource development;
 - 3. Provide traffic volumes forecasted by the resource development for each stage of expansion;
 - 4. Identify roadways, bikeways, and walkways impacted by resource development traffic;
 - 5. Identify and map resource development vehicular haul routes east of the Sandy River; and
 - 6. ~~Provide other information as determined and directed by the Transportation Division.~~
 - B. Operational Study Section
 - 1. Collect field data of existing geometric and traffic control conditions for roadways, bikeways, and walkways;
 - 2. Analyze and evaluate the effect of resource development traffic on the safety of roadway, bikeway, and walkway users;
 - 3. Analyze and evaluate the adequacy of existing roadway, and bridge geometries to accommodate resource development traffic; and

4. ~~Provide other information as determined and directed by the Transportation Division.~~

C. Pavement and Other Structures Study Section

1. Collect field data of existing structure conditions and perform a condition survey of pavement, bridge, and culvert structures on roadways identified as haul routes;
2. Perform survey and testing of pavement deflections on roadways identified as haul routes using non-destructive methods;
3. Analyze and evaluate the structural adequacy of existing roadways, culverts, and bridges;
4. Analyze and evaluate the effects of resource development traffic on the structural adequacy of existing roadways, culverts, and bridges; and
5. ~~Provide other analyses and evaluations as determined and directed by the Transportation Division.~~

D. System Condition Conclusions and Improvement Alternatives Analysis Section

1. Provide assessment of the adequacy of existing roadways and structures to accommodate traffic for the life of the proposed resource development **ignoring** the effects of resource development traffic;
2. Identify limitations of the existing roadways, culverts, and bridges to accommodate resource development traffic for each stage of development expansion including startup;
3. Identify and provide alternatives analysis of roadway geometry and traffic control changes for safety improvements where necessitated by the physical and operating characteristics of the proposed resource development traffic;
4. Identify and provide alternatives analysis of measures to strengthen and/or rehabilitate pavements, culverts, and bridges to adequately withstand the stress repetition loading and other detrimental effects of resource development traffic; and
5. ~~Provide other assessments and recommendations as determined and directed by the Transportation Division.~~

E. Economy/Cost Responsibility Study Section

1. Provide cost estimates to rehabilitate existing roadways for the life of the proposed development **ignoring** the effects of resource development traffic;
2. Determine and provide cost estimates of alternatives provided in Section D-3 above with respect to each stage of development expansion, considering and accommodating resource development traffic for the expected life of the proposed development;
3. Determine and provide cost estimates of alternatives provided

- in Section D-4 above with respect to each stage of development expansion, considering and accommodating resource development traffic for the expected life of the proposed development;
4. ~~Provide other cost estimates as determined and directed by the Transportation Division."~~

NOTE: AT ANY POINT DURING THIS ANALYSIS, THE MINE OPERATOR MAY PRECLUDE STUDY OR IMPROVEMENT OF ANY POTENTIALLY AFFECTED ROADWAY BY DECLARING THAT TRUCK TRAFFIC FROM THE MINE SITE WILL NOT USE THE AFFECTED ROADWAY EXCEPT FOR LOCAL DELIVERIES TO A SITE LOCATED ON THE AFFECTED ROADWAY, AND WILL BE LIMITED TO ALTERNATIVE ROUTES. SUCH A DECLARATION WILL BE ENFORCED THROUGH CONDITIONS OF THE CONDITIONAL USE PERMIT FOR THE MINE.

3. CONCLUSION

- a. The aggregate resource at the Howard Canyon site is being designated to be protected for future aggregate expansion, subject to the limitations set forth above in subsection 2 of section C, Chapter IV. These limitations include 1) prohibition of certain conflicting uses on the aggregate site itself, 2) requiring construction of new noise sensitive uses within the "impact area" to demonstrate that they will not conflict with mining operations to extract the aggregate resource, 3) determination at conditional use review of any mining operation application of an appropriate phasing of annual extraction amounts using attainment and maintenance of certain noise, water quality, and dust standards and the findings of a Traffic Management Plan as the basis for the phasing amounts and 4) various other standards.
- b. The three significant streams in the Howard Canyon area which would be affected by the Howard Canyon quarry operation are being designated to be protected from degradation, subject to the conditions set forth above in subsection 1 of section C, Chapter IV. These limitations involve regulating conflicting uses in the riparian zone of the stream in order to maintain and enhance stream and stream bank economic, educational, public safety, recreational, and fish & wildlife habitat values.
- c. In weighing the relative merits of the Howard Canyon quarry aggregate resource and the streams resources, the Program to Achieve the Goal would protect both resources. The potential impacts to streams from the quarry site would be eliminated by the protection measures, which include 1) verification that DEQ standards relating to water quality which protect the health, safety and welfare of Oregonians are met for mine runoff into the streams, and 2) prohibition of holding pond construction (holding ponds are used to reduce pollutants from mine runoff to acceptable levels) within the riparian zone of either Knieriem or Howard Canyon Creeks.