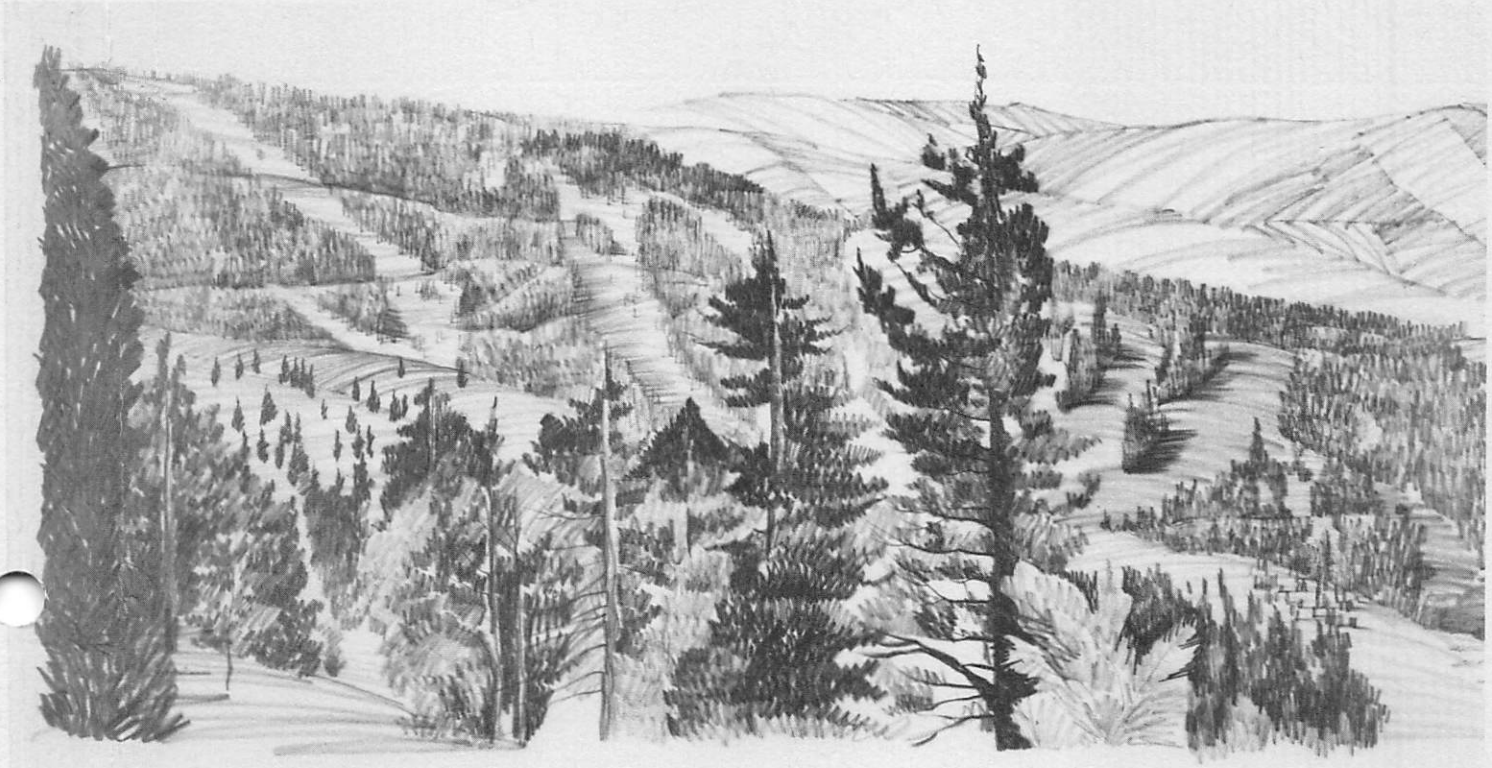
Final

Environmental Impact Statement

SKI INCLINE
Incline Village, Nevada

February 2, 1987



SKI INCLINE

FINAL ENVIRONMENTAL IMPACT STATEMENT

RESPONSE TO PUBLIC COMMENT

Issued February 2, 1987

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Prepared for:
- Washoe County Department of Comprehensive Planning
- Tahoe Regional Planning Agency
- USFS Lake Tahoe Basin Management Unit

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Preparers:
- Design Workshop, Inc.
- Alpengroup
- Omni-Means, Ltd.
- Resource Concepts Inc.

SKI INCLINE

FINAL ENVIRONMENTAL IMPACT STATEMENT

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1. INTRODUCTION AND SUMMARY

This document in conjunction with the Draft EIS issued October 14, 1987 forms the Final EIS for the proposed Master Plan for Ski Incline, Incline Village, Nevada. It has been prepared consistent with Washoe County and Tahoe regional Planning Agency guidelines, and represents a completion of the environmental analysis for the proposed plan. This volume contains only responses to the public comments on the Draft EIS. Analysis and technical information is contained in the DEIS.

The scope of the Draft EIS was determined through a coordinated effort between TRPA, U.S. Forest Service, Washoe County and numerous state and federal agencies. The direction and nature of the analysis has been reviewed by TRPA as an administrative draft, and by the TRPA, Washoe County, other parties, and the public through distribution of the Draft EIS. Comments regarding the analysis settings, impacts, and mitigations were brought forth through public hearings of the TRPA Advisory Planning Commission and by written comments directed to TRPA. The period for public comment ended on January 5, 1987.

Completion of the responses to the Draft EIS comments allows this document to be reviewed by the TRPA staff, Governing Board and action taken regarding EIS certification.

2. LIST OF COMMENTING AGENCIES AND PERSONS

- Tahoe Regional Planning Agency, APC and Staff
  David Ziegler, Chief, Long Range Planning
  Issued: January 7, 1987

- USDA Forest Service
  Jon D. Kennedy, Regional Planning and Budget Officer
  Prepared December 18, 1986
  Issued: December 22, 1986

- The Resources Agency of California
  Gordon F. Snow, Ph.D., Assistant Secretary for Resources
  Prepared: January 2, 1987
  Issued: January 5, 1987

- California Regional Water Quality Control Board,
  Lahontan Region
  O. R. Butterfield, Executive Officer
  Prepared: January 5, 1987
  Issued: January 7, 1987

- USDA Soil Conservation Service
  Richard Pyle, District Conservationist
  Prepared: December 15, 1986
  Issued: January 7, 1987

- USDA, Forest Service, Lake Tahoe Basin Management Unit
  Frank A. Magary, Forest Landscape Architect
  Prepared: January 5, 1987
  Issued: January 15, 1987

- State of Nevada, Department of Wildlife
  William A. Molini, Director
  Prepared: December 9, 1986
  Issued: January 15, 1987

- State of Nevada, Department of Conservation and
  Natural Resources
  Richard Thomas, Water
  Dan Gross, Groundwater
  Rick Jones, Resource Management Officer
  Alice M. Becker, Staff Archeologist
  Prepared: December 17, 1986
  Issued: January 15, 1987

3. COMMENTS AND RESPONSES

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS must provide information on any and all proposed trenching for snowmaking, utilities, or other purposes. The EIS must also estimate the temporary and permanent environmental impacts of such trenching, specifically in the areas of possible erosion and difficulty of revegetation.

RESPONSE:

As disclosed in Section 4.2.3 of the Draft Environmental Impact Statement dated October 14, 1986, the long range plans for development of Ski Incline may require the installation of snowmaking equipment on Trails 1, 3 and 5. This activity will require underground installation of piping, stump removal, and grading of portions of the trail. It is anticipated that during the design process in these areas of possible erosion and in those areas identified as being difficult to revegetate, permanent erosion control and silt catchment facilities will be specifically detailed and incorporated into the construction plans. By impeding the erosion process and controlling silt discharges at the site of disturbance it is anticipated that adverse environmental impacts downstream will be eliminated.

The proposed trenching for utility lines is planned to follow the ridge line in the center of Trail #5 for approximately 5,200 feet. The trench itself is proposed to be 4 feet deep and 1 foot wide and will accommodate a water line, air line, sewer line and power line. The water and air line is proposed for snowmaking; the sewer line may be connecting the future Twin Lakes Lodge with the existing IVGID owned sewer system; the power line may be necessary for driving the Summit Lift (if it is a top drive terminal) and provide power to the Twin Lakes Lodge. As described above, the trenching technique and subsequent erosion control measures will follow the standards described in the BMP and will be specifically detailed and incorporated into the construction plan.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS should include (perhaps as an attachment) a complete, detailed plan of construction, including a plan for logging the new ski runs. The draft Code of Ordinances (October 31, 1986) sets forth the proposed TRPA standards for logging on sensitive lands. Although the Code is still under review, Ski Incline should use the October 31 draft for guidance on acceptable logging practices until and unless it is modified. We have received a letter from the Nevada Division of Forestry stating that the proposed TRPA standards are too restrictive to accomplish the stated goal of increased forest diversity. However, the October 31 draft of the Code remains as TRPA's most current statement on logging standards.

RESPONSE:

Two plans of construction for Ski Incline have been prepared. The first plan entitled "Mountain Development Plan" is an appendix to the Ski Incline Master Plan; the second is the detailed plan of construction, which will accompany the project permit application at the appropriate time.

In response to this comment, the TRPA Code of Ordinances has been reviewed and strict compliance with Chapter 71 of the Code is being provided. As required in the Code, logging techniques will employ either aerial or over the snow removal, depending on elevation. This elevation is delineated on the Mountain Development Plan.

In conjunction with the permit application, a harvest plan (written by a registered, professional forester) will be submitted.

Over the snow logging will be implemented on the lower portion of the mountain. The techniques involve hand felling and skidding of individual trees prior to limbing. It is proposed that slash will be piled and burned periodically in order to maintain small, contained burn sites and minimize disturbance to the ground. Aerial logging will take place on the upper portion of the mountain and trees will be transported to specified locations where limbing and slash disposal will be conducted.

All ski trails have been flagged in the field and trail design has maximized the objectives of Chapter 71 of the Code. Specifically under Section 71.2.A. items #3 (enhance species and/or wildlife habitat diversity), #4 (enhance/ protect such tree species of limited occurrence as incense cedar, sugar pine, western white pine, mountain hemlock, whitebark pine, western juniper), and #5 (protect sensitive lands) have been maximized in the trail design process.

The creation of trail edges will enhance species and wildlife habitat diversity.

Locating and using islands within trails will protect such tree species of limited occurrence as incense cedar, western white pine, mountain hemlock, white bark pine, western juniper. Tree islands will also be used to protect sensitive lands such as drainage courses, which exist within the trail limits.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS should indicate clearly the plans regarding road access to the top of the ridge, and discuss all associated impacts and mitigation. Permanent roads must be incorporated into the coverage calculations for the proposed master plan.

RESPONSE:

The development of a formal access road to the top of the ridge has been eliminated from the planning process. During construction of the ski lift terminal at the top of the mountain it is anticipated that several tracked vehicles will be utilized at this location. The access route to the upper site has been defined as the ridge line following the areas of disturbance previously outlined on the EIS. Where tracked vehicles cause disturbance outside of the identified areas of rock removal temporary erosion control measures will be implemented immediately during construction. Permanent erosion control consisting of drainage, water barring, regrading and reseeding will take place upon the completion of construction.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS should include a proposed plan of water quality protection, enhancement, and monitoring for the ski area. The mitigation program for the master plan should include not only a long-term water quality monitoring program, but also a process for identifying and correcting water quality problems that may arise in the future.

RESPONSE:

Appendix I of the Environmental Impact Statement contains a proposed water quality monitoring program for Ski Incline. This plan was instituted by Ski Incline during July of 1986 and will continue through the duration of the project. Ski Incline is committed to continuing that monitoring plan as required by TRPA and the Division of Environmental Protection into the future. The initial water quality data developed through this monitoring plan is shown in Table 4.2.5 of the Draft EIS. Ski Incline also will initiate an annual visual inspection program of Ski Incline acceptable to TRPA and the Division of Environmental Protection. This visual inspection could occur immediately after snow melt and prior to snowfall of each year. This will allow for the identification of erosion control areas that may contribute to water quality problems that will be identified by the water quality monitoring plan and allow for Ski Incline to demonstrate that they are correcting these identified erosion areas during the summer months. Ski Incline realizes that the water quality objectives of TRPA and the Division of Environmental Protection are to maintain and improve the existing instream water quality. Ski Incline is committed to maintaining water quality and is willing to entertain mechanisms agreeable to TRPA and the Division of Environmental Protection to demonstrate their maintenance.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS should address, in addition to the existing disclosure in the DEIS, a discussion of the cumulative impacts of ski area development in the general vicinity of Mount Rose on traffic and transportation in the Incline Village area.

RESPONSE:

As disclosed in the Draft EIS, Section 4.5, Transportation, all traffic and transportation impacts to Incline Village and the North Tahoe area would be positive due to the reduction in VMT's resulting from expanded transit service. Cumulative impacts caused by this proposal would also be positive, regardless of impacts resulting from other developments.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

"Because the APC expressed strong concerns about the encroachment of the new ski runs on over 2 acres of existing stream environment zone (SEZ), the final EIS should expand upon the discussion of SEZ impacts, possible alternative designs which could reduce or eliminate the impacts, justifications for making the required findings which would allow public outdoor recreation encroachment in an SEZ under the TRPA Goals and Policies, and plans for mitigating impacts upon SEZ's. In particular, any specific information on offsetting SEZ restoration projects should be included, if it is available."

RESPONSE:

As disclosed in the Draft Environmental Impact Statement and described in more particulars in the Ski Incline Mountain Master Plan, approximately 1300 lineal feet of SEZ are shown for modification. Within this 1300 feet approximately 300 are shown as culvert and 1000 feet is depicted as a perforated half culvert design.

This SEZ modification is necessitated by the natural topographic configuration of the terrain which begins as a large wide-open bowl at the 8500 foot elevation and gradually tapers to a narrow drainage at the very bottom of this portion of the mountain. Only about 300 feet of the bottom portion of this drainage way is perennial stream. The upper portions of the SEZ do not exhibit year-round surface water flow; however, the area must be characterized as SEZ due to the existence of riparian vegetation types. The permanent presence of surface water on the bottom portion of this trail #1 constitutes a significant operating problem for the ski area in that during early winter and late spring conditions, significant icing would take place on the ski trail that was designed over it. Interaction between the snow pack and ground water on surface water below would cause a significant ice-damming problem and deteriorate the quality of the skiing experience. In general, this 1300 lineal feet of improvement would make available in excess of 20 acres excellent intermediate skiing.

Several alternatives to these drainage improvements were considered in the trail design process. First, the possibility of locating the trail outside the drainage was considered. This alternative proved infeasible in that the trail, in order to achieve a quality recreational experience, must follow the natural fall line of the mountain. To the degree that a trail does not follow the natural gravitational flow of terrain, will cause either:

1. a poor recreational experience in that the trail will have a double fall line; or

2. the amount of earthwork and slope modification work needed to place the trail in the correct fall line would constitute an environmental disruption far in excess of anything created by the drainage modifications proposed in the project.

Two types of drainage improvements are proposed. The upper 1000 feet of the area to be culverted is proposed for coverage with a perforated half-culvert. This is simply half of a culvert which would be laid over the natural stream channel, perforations would remain in this culvert to allow surface water during peak runoff conditions to recharge the stream side vegetation. From a skiing maintenance standpoint, these shrubs would be pruned annually; cut back to allow skiing with 2 feet of snow pack.

An alternative procedure was suggested by the TRPA APC which will be incorporated in the plan for construction. This suggestion calls for the seasonal removal of the half culvert section. That is, on bare ground conditions in the spring, these half culverts could be removed and stored and placed back in the stream in the fall of the year in anticipation of the ski season. It would allow for a visually complete natural stream channel and would remove any potential disruption to the natural hydrologic functions of this drainage. Another possibility exists for treatment of the second and lower portion of the drainage which would involve the slight relocation of the channel to remove surface water to the side of the projected trail route with no culvert. This alternative has been considered and it is the judgment of the professional hydrologist of the project that this approach would be equal to the proposed culvert in the existing channel in terms of environmental disruption; however, both alternatives will be discussed at the project permit stage.

Within the TRPA code of ordinances, six specific criteria are enumerated which, if met, would allow for the disturbance of SEZ's by public agencies. These six criteria and findings of compatibility for each are as follows:

1. <u>The project is a necessary part of a public agency's long range plan for public outdoor recreation.</u> This criteria is met due to the fact that the Ski Incline Master Plan has been formally adopted by the Incline Village General Improvement District as a long range plan for recreational facilities in the district. The Board took action to adopt this plan on September 11, 1986. While skiing is operated by Ski Incline on a for-profit basis and typically fees are charged for lift tickets, skiing is generally regarded within the Tahoe Basin, be it on federal or private land, as a public recreational facility. This is supported by virtue of the fact that all

members of the public are welcome, use the facility, it is widely available and, in general, quality skiing is considered a scarce public recreational resource. Skiing in this sense, is a public, outdoor recreation facility in the strictest sense of the word and reflects a formal long range plan by a public agency within the Tahoe Basin.

2. The project is consistent with the recreational element of the regional plan. The final draft plan area statement for the Ski Incline portion of Lake Tahoe identifies expanded skiing activities at Ski Incline and is supported by the allocation of an additional 900 PAOT of skier capacity.

3. The project by its very nature must be sited in a Stream Environment Zone. Much of the mountainous terrain in the Tahoe Basin consists of a series of ridges and gullies. In the design of skiing, trails must be located on either the peak of the ridge or base of a gully. Terrain in between lies off fall line and does not offer a natural opportunity for ski trail development.

4. There is no feasible alternative which would reduce the extent of encroachment in Stream Environment Zones. The temporary use of half-culvert is mentioned above and the limited extension of existing culvert presents measures designed to minimize SEZ disturbance while yet accommodating the minimum required for operation of the ski trail. The alternatives again which were considered were relocation of the lower portion of the trail onto an adjacent steep hillside. This was rejected due to the extensive earthwork and soil disturbance that would be created. The second alternative is to relocate the main channel of the lower portion of the stream to the side of the ski trail. This alternative will be discussed with TRPA permitting officer at the time of the project permit application and it is now proposed that the half-culvert portion of the project will be installed with culverts that will be seasonally removed.

5. The impacts are fully mitigated. As described by the settings, impacts, and mitigations described in Section 4.2.3, Water Qualtiy, of the Draft and Final EIS, the impacts of the proposal on water quality and hydrology are offset by the mitigations and the proposed restoration of an SEZ at 1.5 times the amount of proposed disturbance. There wold be no net negative water quality impacts. Again, just the lower portion of the drainage is a perennial stream which collects several springs. Above that point, the channel consists of a drainage way for seasonal

discharge from either rain storm events or spring snow melt.

6. Stream Environment Zone lands are restored in the amount of 1.5 times the area of Stream Environment Zone which is disturbed or developed by the project. When Ski Incline was built in 1966 extensive reaches of natural drainages were placed in culvert to accommodate ski trail design. Given the modifications to the existing trails created by the new master plan, a stream which underlies the existing Upper Ballroom Trail will be placed back into a natural drainage way. The stream is currently confined to a corrugated metal pipe which is placed below the ski slope. It is proposed that this stream be restored to a natural condition at the north side of the Upper Ballroom Trail for a lineal distance equivalent to 1.5 times that of the full culvert or disturbed portion of the SEZ in question.

This project will ensure the implementation of the TRPA policies regarding SEZ encroachment. The net effect of this development will be the improvement to Stream Environment Zones within the project area. By virtue of the restoration project proposed along with the fisheries improvements that are proposed on Lower Incline Creek, the project will in balance constitute a net benefit to water quality given the restoration of currently culverted streams at the rate of 1.5:1. In short, more natural drainage ways will exist as a result of this project than currently exist and the project is therefore viewed as one which fully mitigates impacts for a use which is clearly defined as public recreation and is being undertaken by a public agency. Specific off-setting mitigation measures include restoration of the stream under the Upper Ballroom Trail, and construction of a fish ladder or baffle to allow upstream migration below Fairview Boulevard and Lower Incline Creek.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

"As you firm up your plan of construction, logging plans, and access road plan, please review the disclosure of impacts, upon the historic logging flume and other historic features of the Ski Incline site, and ensure that all impacts are clearly disclosed and adequately mitigated."

RESPONSE:

As disclosed in the Draft EIS, Section 4.11, Cultural Resources, activities potentially impacting historical features on the site are logging, lift construction, and access road construction. As the map on page 146 illustrates, only the north/south flume occurs with the proposal area. Impacts of timber cutting and logging removal can be adequately mitigated by the measures described in the EIS, those being logging by over-the-snow or helicopter methods and restriction of skidding areas to no more than three narrow crossings. Impacts of lift construction may be mitigated as described in the EIS by locating lift towers at a distance away from the flume to avoid construction activity impacts. There will be no impacts associated with an access road, as such a road has been removed from the proposed plan. Access for construction will be as proposed in the Plan of Construction included as Appendix B in the Final EIS.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS should include an updated visual analysis based upon the final design decisions for the ski area expansion. This analysis should address not only general scenic quality concerns, but also impacts of the proposed expansion upon the TRPA scenic thresholds, which set visual quality standards for all roadway and shoreline segments in the Tahoe Region.

RESPONSE:

The computer created visual simulation has been updated to reflect the current proposed plan. Still images (slides) of this simulation are provided with the Final EIS and will be presented at subsequent TRPA APC and Governing Board meetings. Differences in the simulations are the result of improved computer techniques, added feathering of trails and deletion of the access road.

The applicable scenic thresholds from the Draft Regional Plan Goals and Policies state that for this project, the Scenic Resources Inventory numerical rating for the evaluation area including individual resources shall be maintained or improved. The Draft EIS includes the evaluation both in Section 4.10, Scenic Resources, and as Appendix A. The preparers of this EIS cannot attempt to provide new evaluation values without experience in creating the original values, but we can respond, in general, to the evaluation's findings.

Positive elements such as rock formations and views from the ski area will be enhanced through increased access opportunities to the mountain. Noted negative elements such as base area buildings and embankments will be upgraded and landscaped, and the maintenance shop will be relocated to an on-mountain site. The improvements to the existing base area and use of ski trail design guidelines described in the Draft EIS as mitigations are consistent with the recommendations made in the Scenic Resources Evaluation.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

The final EIS should include a disclosure of all anticipated impacts in the area of water use and water rights. Specifically, what will be the new demand for water, with and without snowmaking, and what will be the impact of that new demand on physical supplies and water rights?

RESPONSE:

The following describes the new demand for water with and without snowmaking as well as the impact of that new demand on physical supplies and water rights.

Without future expanded snowmaking the current water demand for snowmaking is:

10 million gallons/season
or
30.67 acre feet

With future expanded snowmaking the proposed water demand for snowmaking is:

15 million gallons/season
or
46.6 acre feet

The water demand for Twin Lakes Lodge is:

325,000 gallons/season
or
1 acre foot SUMMARY:

Future proposed water demand for snowmaking ...	=	46.6 acre feet
Future proposed water demand for Twin Lakes Lodge	=	1.0 acre foot
TOTAL	=	47.6 acre feet

Total IVGID water rights	= 3,904	acre feet
Present Use	= 3,225	acre feet
Total future proposed demand	= 47.6	acre feet

NOTE:

Although it seems that 15 million gallons of water is used for the proposed future snowmaking expansion, only 16% is the typical consumptive use, which means that 12.7 million gallons of this water will return to the surface water, hydrologic system of the Tahoe Basin. The same calculation may be made for the existing, current snowmaking water consumption.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

"The final EIS should include a disclosure of anticipated project phasing. The discussion of project phasing should be coordinated with the plan of construction, mentioned above."

RESPONSE:

The project phasing is disclosed within the Master Plan under Section IV, Phasing and Costs. This phasing schedule reflects five major phases of the project with individual project details itemized under each phase with associated estimated costs. The entire phasing schedule is not repeated here; however, in general, the phases are not tied to calendar years, but represent logical sequences of construction activity which will be constructed only after the financial performance of the preceding phase can be evaluated. These phases generally are as follows:

Phase I:
Add new summit terrain;

Phase II:
Add new out of base capacity and undertake the Ski Incline base area redevelopment;

Phase III:
Twin Lakes Lodge;

Phase IV:
Build the Lakeview Chair.

The plan of construction will be phased in strict conformance with the project phasing.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

"The environmental impacts of the 'Twin Lakes' lodge will depend largely on the intended recreational experience the lodge will provide. Will it have bathrooms? Running water? Sewer lines? Will it have hot food service? How big will it be? Will it have decks? How will it be staffed? The final EIS should be more precise about the intended use of the 'Twin Lakes' lodge, including the phasing of those uses."

RESPONSE:

As described in the Ski Incline Master Plan of September 1986, improvements at the new summit (other than lift service) will occur in two separate phases. In Phase I of the ski area improvements, a ski patrol hut of 500 square feet will be built and will include patrol services and communications equipment, restrooms, cold food service, and dining deck(s). Utilities at this phase will include electric, water and sewer. The restrooms may utilize a localized closed container system for sewage storage; it may also be connected to IVGID's sewer system or use a disposal system not located within the Tahoe Basin.

In Phase III, the Twin Lakes Lodge (4500 sf) will be built. It will include ski patrol headquarters functions, restrooms, hot food service, and outdoor dining decks. This lodge will be served by running water and sewer service.

COMMENT: TAHOE REGIONAL PLANNING AGENCY

"Finally, the APC has expressed a concern that Ski Incline expansion be consistent with the Criteria for Development and Expansion of Ski Areas, Lake Tahoe Basin, developed by the California Tahoe Regional Planning Agency through an interagency effort in 1977. Although this document has no official status with the TRPA, it would be useful to review this document and discuss in what ways the Ski Incline proposal is consistent, and not consistent, with it."

RESPONSE:

The criteria handbook has been reviewed and compared to the Draft Environmental Impact Statement for Ski Incline. The handbook outlines numerous environmental planning criteria; each is briefly summarized below with a comment as to the sufficiency of the Ski Incline DEIS in terms of responding to these CTRPA development criteria.

1. Fisheries - A complete inventory of fish species present, abundance, distribution, growth, and impacts of the project on fisheries has been documented in the report.

2. Wildlife - An analysis of wildlife habitat existent on the site has been prepared and the EIS fully responds to all the criteria in the CTRPA document.

3. Soils - The handbook outlines the process for mapping and identification of soils impacts and requests an erosion control plan. A plan of construction, water quality management plan and erosion control plan have been prepared in greater detail than the handbook requires.

4. Geology - The handbook requests information on subsurface conditions, slope stability, drainage characteristics and snow avalanche hazards. Each of these points has been discussed in detail in the DEIS.

5. Vegetation - The handbook suggests that vegetation types on the site be analyzed. Inventory of vegetation and identification of general stand types has been prepared in conformance with the requirements of the handbook.

6. Air Quality - Numerous air quality criteria are outlined in the handbook with emphasis on use of electric motors as opposed to fossil fuel consuming motors for lifts and support equipment. Additional

air quality criteria have been incorporated in the project.

7. Water Quality - The handbook suggests that a specific plan of construction be prepared to identify logging techniques, heavy equipment access routes, non-disturbance of streams, and stockpiling of topsoil for reuse and immediate revegetation efforts. Each of these criteria are incorporated in the Plan of Construction for Ski Incline.

8. Road Maintenance - The criteria in the handbook suggest that lift towers and terminals be placed by helicopter to the extent possible and as is indicated elsewhere in the responses, the proposed access road at Ski Incline has been dropped from the proposal and the Ski Incline project is in complete conformance with this criterion.

9. Aesthetic Quality - This portion of the handbook outlines the requirements for visual analysis to ensure that trail design occurs in an aesthetically pleasing manner and that trails incorporate the use of feathered edges, islands, bays, create trail openings which have a natural appearance when viewed from long distance. The Ski Incline project has been analyzed in greater detail to meet USFS and TRPA visual criteria.

10. Public Utilities - The Ski Incline expansion has been evaluated by the suppliers of all public utilities to the project and assurances for ability to serve have been provided by each utility entity.

11. Transportation - The Ski Incline plan is in complete accord with the transportation policies outlined in the CTRPA guidelines. No increases in day skier parking are anticipated; expansions will be dependent upon expanded transit facilities.

CONCLUSION:

The CTRPA Criteria for Development and Expansion of Ski Areas in the Lake Tahoe Basin represents an excellent set of guidelines for the preparation of ski area development plans. The Ski Incline Master Plan and Draft Environmental Statement have responded to each and every one of the points outlined in this handbook.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION

"The entire report needs better editing; there are many typographical errors or misspelled words (e.g., 'original plan' for 'regional plan'), and the use of jargon ('Type I and Type II improvements,' page 64), without definition in the text makes it hard to follow if one has not read the separate master plan. In particular, the table of Nevada water quality standards should be checked closely. The Algal Growth Potential standard is misquoted and specific conductance is expressed as 'micro ohms' rather than 'micromhos.'"

RESPONSE:

The Draft EIS has been reviewed by the preparers for typographical errors. Errors found to be significant in terms of the meaning or accuracy of statements, texts, or tables have been revised and are included in the Final EIS as Errata, Section A.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

"Grading of new ski runs is not being proposed initially; it could be done later in connection with the installation of snowmaking equipment if long-term snow conditions indicated such equipment is desirable. Because of the potentially significant water quality impacts of erosion from graded slopes, and the difficulty of revegetating them, feasible alternatives should be sought. Is there any snowmaking equipment available which does not require extensive grading for installation?"

RESPONSE:

The snowmaking system contemplated for installation at Ski Incline would be an air/water type system. These systems combine water and air under high pressure, delivered to a hydrant which then in turn produces a spray through a specialized nozzle or snow gun device. Such systems involve the purchase of expensive air compressors, high pressure water pumps and extensive piping for installation. Typical costs for such systems exceed $22,000 per acre. A typical ski area will operate a snowmaking system at costs in excess of $300 per hour. Given the expensive capital and operating costs for such a system, it is only practical to apply man-made snow to a smooth surface which can be skied with a minimal snow pack. Given these costs it is generally not considered feasible to install expensive snowmaking systems to make snow on trails that would include fresh cut stumps, boulders and generally uneven terrain. In general, the practices in the industry is that with man-made snow systems installed, trails should be capable of providing quality skiing from 6" of man-made snow. For this reason, it is anticipated that trails 1, 3 and 5 would ultimately require grading work and removal of stumps in order to accommodate the installation of snowmaking. However, as is indicated in the Ski Incline Master Plan phasing schedule, snowmaking is proposed as Phase IV which is relatively distant in terms of scheduling and will allow numerous years of operation to evaluate the need for such systems. The new terrain being added to Ski Incline is all at a significantly higher elevation than the existing facilities, which means it receives more annual snow fall. Even though snowmaking additions may occur at a later phase, some grading may be necessary prior to implementation of Phase IV, but this will be restricted to designated areas and with full BMP's. This could enable Ski Incline to offer a quality skiing experience in a safe environment. To answer the questions raised in the comment, there are no known snowmaking systems that would be economical to install without accomplishing some level of slope grading.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION

"It is proposed that drainage courses (erroneously referred to as 'Stream Environment Zones') be enclosed in culverts on new ski runs. The argument that this feature of the project must 'by its very nature' be located in Stream Environment Zones because ski runs generally follow the fall lines, does not seem to meet the intent of the exemption criteria in the '208' water quality plan. These criteria were intended to promote water oriented public recreation projects. Feasible alternatives to the proposed SEZ work should be considered, such as seasonal culverts or bridges which could minimize disturbance of soils and vegetation."

RESPONSE:

Please refer to the response to the SEZ comments raised by the Tahoe Regional Planning Agency.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION

"Potential water quality impacts of chemicals which could be used on the project site should be considered. These could include fuels, solvents, snow grooming chemicals, deicing chemicals for parking lots and walkways, fertilizers and pesticides for use in landscaping, and domestic wastewater from the proposed high elevation lodge. Will the stumps to be left in place on the cleared ski runs be treated with fungicides? Mitigation should include contingency plans for prevention and cleanup of leaks and spills of wastewater and hazardous chemicals."

RESPONSE:

In the operation of the ski area, Ski Incline does not use any chemicals in conjunction with snow grooming or deicing. Use of fertilizers is closely controlled by TRPA and the 208 BMP standards, and any use of fertilizers by Ski Incline in revegetation or landscaping efforts will meet those requirements.

Ski Incline does use and store fuels for ski area maintenance equipment on-site. As part of this proposal, Ski Incline will relocate the maintenance facility to a site near the existing summit. Storage in this area will be in above ground tanks and for facility heating and emergency use only. The existing bulk storage facility in the base area will be replaced by a new subgrade storage facility above the Day Lodge. All Construction related to fuel facilities will be designed and installed according to applicable requirements of the State of Nevada. It is our understanding that TRPA does not have regulations in place regarding fueling facilities.

Wastewater facilities from the Twin Lakes Lodge will be designed, constructed and inspected in accordance with applicable regulations. There are three alternatives to deal with wastewater disposal from the proposed high elevation lodge:

1. Pump water to a storage tank on top and use that water in conjunction with a small diameter sewer line equipped with a grinder pump. That sewer line could be connected to IVGID's sewer system.

2. Use a chemical or incinerating toilet type with a storage tank, which could be periodically transported to IVGID's sewer plant.

3. Pump water to a storage tank on top and use it in conjunction with a septic tank or a tertiary package plant located outside of the Tahoe Basin.

Precautions to prevent and provisions to clean up leaks and spills of wastewater or fuels include:

> Routine sewer cleaning (no pump stations or major storage tanks are on-site); close monitoring of all waste water; construction of containment dikes in the event of a sewer line blockage; tank trucks to transport sewage or other spills to existing sewage treatment plant.

Stumps, which are left in place on the cleared ski runs will be flush cut and no fungicides will be used.

NOTE:

Ski Incline is owned by IVGID which also operates the water and sewer department for Incline Village; therefore, precautions to prevent leaks and provisions to clean up leaks would be handled in a professional manner and in accordance with industry accepted standards.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION

"Cumulative impacts of the project should be discussed together with those of other existing and planned ski areas in the Lake Tahoe Region. The TRPA is limiting the total allowable capacity for ski area expansion in the Tahoe Basin (in terms of 'people at one time'). The trade-offs involved in allocation of capacity to Ski Incline rather than other ski areas should be considered. While the Ski Incline project has potential to reduce traffic, could other ski areas expand with less need for grading and disturbance of SEZ's."

RESPONSE:

The question of PAOT distribution over the entire Lake Tahoe basin and its potential impact on VMT's and environmental disturbances is most appropriately addressed by the regional planning process rather than by the proposal and evaluation of any individual project applicant, and so will not be addressed here.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION

"The EIS concludes (page 39) that there will be no irreversible impacts on soils. However, the creation of new impervious surface and the clearing of soils which are very difficult to revegetate should be viewed as, at least, very long term impacts."

RESPONSE:

The TRPA Goals and Policies provide specific limitations on the amount of impervious coverage allowed in a proposal. Hard coverage, however, is practically irreversible.

General clearing of vegetative surface cover will only be required in the event of installation of snowmaking systems (see comments and responses regarding snowmaking). On Ski Incline's existing slopes, they have demonstrated success at revegetation and anticipate similar successes on any future graded slopes. While cover removal and grading are clearly changes, there will be no long term degradation of water quality, nor will changes be so severe as to be physically irreversible.

COMMENT: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION

"The discussion on page 170 of compatibility with plans for the Tahoe area should include compliance with the bistate '208' water quality plan."

RESPONSE:

Add the following statement to the Draft EIS, Section 8.0, Project Compatibility, subsection Tahoe Regional Planning Agency, page 174:

All construction and development management related to the improvements described in the proposal shall be designed, built, and reviewed to comply with all requirements in the TRPA's Water Quality Management Plan, Volume II, Handbook of Best Management Practices and with TRPA ordinances 81-1 and 81-5 (or their successors) which implement the 208 plan.

COMMENT: USDA SOIL CONSERVATION SERVICE

"I understand the maintenance road will not be constructed, and if this is not the case it needs to be addressed in the EIS."

RESPONSE:

No new access road will be built. Access for construction will be as described in the Plan of Construction, Final EIS, Appendix B.

COMMENT: USDA, SOIL CONSERVATION SERVICE

"Parking: With 900 new PAOT's, it should be better addressed where they are coming from and where parking facilities will be. From the discussion at APC, the parking lot is full one or more days a year now; also, will there be a cut off of ticket sales when the parking lot is full?

RESPONSE:

The master plan for the expansion of Ski Incline is predicated on the assumption that no skier parking increases will be permitted. This is in specific response to stated TRPA environmental thresholds. The plan to accommodate increased skier visitation at Ski Incline involves two general strategies. The first is to provide the frequent service by transit service to important points of origin in both Incline Village and other North Shore destinations. The Ski Incline Master Plan calls for the operation of four separate transit vehicle routes to deliver skiers to the ski area. It is true that on ten operating days per season, close-in parking to the ski area is full. However, with frequent transit service provided to nearby lodging sites at Incline Village, Crystal Bay and Kings Beach, it is anticipated that the transit services will not only provide access for additional skier visitation, but will also reduce the need for existing private vehicular travel to the ski area. A second strategy for realizing increased skier visitation without expansion of parking is based in the marketing plan for Ski Incline which will bring more families to the ski area during weekday periods. An additional component to the marketing will be to attract more charter groups to Ski Incline who will also be transported to the ski area by transit vehicles. The implementation of four transit routes, weekday marketing and marketing to group charters, will allow Ski Incline to realize significant increases in annual skier visitation without dependence on additional skier parking at the immediate base area.

COMMENT: USDA SOIL CONSERVATION SERVICE

"Where will water come from for snowmaking? Do they have water rights?"

RESPONSE:

Refer to the response to comments raised by the Tahoe Regional Planning Agency regarding water use and water rights.

COMMENT: USDA SOIL CONSERVATION SERVICE

"Do I understand correctly that no Forest Service land will be now included in the proposed plan?"

RESPONSE:

No, you did not understand correctly. In order to complete the construction of trail 1 and incorporate skiing in the Mill Creek drainage within the plan and arrive at a ski area permit boundary which follows logical topographic divides, approximately 292 acres of additional USFS land has been identified in both the Ski Incline Master Plan and EIS document. These lands will be added either through the issuance of a special use permit by the Lake Tahoe Basin Management Unit, U.S. Forest Service, or through accomplishment of a land trade.

COMMENT: USDA SOIL CONSERVATION SERVICE

"The issue over stream zones needs to be defined. Can public agencies develop something like a ski run in an SEZ or can it be developed outside SEZ? Can private individuals do the same? If not, why?"

RESPONSE:

The justification for use of the SEZ by IVGID in the master plan for Ski Incline is covered in responses to TRPA comments regarding SEZ's. The authority for private actions with regard to SEZ's is covered by the current code of ordinances published by TRPA, an established policy of the agency. The question involves a matter of discretion with the Governing Board of TRPA and cannot readily be answered in general terms, but only in response to specific project situations.

COMMENT: USDA SOIL CONSERVATION SERVICE

"If development of this type is allowed, how will the SEZ goal be met?"

RESPONSE:

Refer to response to comments raised by TRPA regarding SEZ issues.

COMMENT: USDA SOIL CONSERVATION SERVICE

"Where close or final grading is to be done for snowmaking, how will that be handled as, at this point in time there are no BMP's. It seems to me that more detail should be added because of this document going through before the BMP being developed; need to address such items as stockpiling of soil, mulching, etc."

RESPONSE:

As required to meet BMP Standards for water quality, numerous issues relating to grading and construction have very specific requirements which must be met.

COMMENT: SOIL CONSERVATION SERVICE

"I'm not sure how the culvert in the SEZ will be changed. There was some discussion on removing the culvert during the summer months; I feel this should be addressed and the effects, plus or minus, discussed."

RESPONSE:

Refer to the responses to the comments raised by the Tahoe Regional Planning Agency regarding SEZ issues.

COMMENT: USDA SOIL CONSERVATION SERVICE

"Again, I don't believe the issue of fisheries has been addressed formally in any way. Will the culvert under Fairview Avenue and Incline Way be replaced to allow for fish movement?"

RESPONSE:

Fisheries is addressed as a study area in the Draft EIS, Section 4.4.3, Fisheries. The culvert mentioned above is noted for construction of fish ladder (baffle) on page 92 of the Draft EIS.

COMMENTS: UNITED STATES FOREST SERVICE
LAKE TAHOE BASIN MANAGEMENT UNIT

COMMENT 1:

"Page 121: The recommendation for 'Preserving the Scenic Quality of Ski Incline (Ski Slopes)' provides no guide for action:

> 'These slopes have been modified for skiing in a way that is sensitive to the natural forms and vegetation. The resulting ski slopes are much more visually appealing that those of other ski areas in the basin. (How? Most of Heavenly Valley and Homewood can't be seen at all, but it is apparent that all of the expanded Ski Incline will be seen). These slopes with their heavy forest cover create a very scenic recreational setting and should be preserved (in what state? Developed or undeveloped?) to insure a quality recreation experience.'

This paragraph is verbal mush."

RESPONSE:

As described in the Draft EIS, page 119, the setting for Ski Incline was described by a synopsis of the TRPA Scenic Resource Evaluation of 1983. The paragraph referenced to here is drawn directly form that evaluation.

COMMENT 2:

"Page 122: The Summary of Overall Ratings provide no clue as to how the factors were weighted to come up with these 4's and 3's. Combining the scores of the man-modified ski slopes and the surrounding natural terrain confuses things even further. Because we are dealing with an EIS, we have to compare the unmodified natural scene with the modifications proposed in the EIS. This is done later, but erroneously (see below).

"The computer simulation models the tree mass as a uniform three-dimensional solid 75 feet in height, but the photos in appendix H show clearly that very few trees are of this height. The text under 'Flora' (p. 66) emphasizes the changes in the density and height of the timber stands from the bottom to the top, but this is not reflected in the visual analysis. One result could be that the 'concealing effect of the tree masses' (p. 130) may be exaggerated in the simulations. On the other hand, the presence of sparser stands near the ridge top may serve to reduce the contrast of the ski runs, but there is no way to tell that from this analysis."

RESPONSE:

The overall ratings shown are taken directly from the TRPA Scenic Resources Evaluation and are intended to represent TRPA conclusions about the existing setting at Ski Incline. The preparers of this EIS have made no attempt at a numerical evaluation of the site, but rather have developed computer simulations which can be evaluated separately by each viewer. The system of criteria and weighting for the TRPA evaluation was erroneously omitted in the Draft EIS as Appendix D, but is included in the Final EIS as Appendix A.

The limits of flexibility and technology require the use of an assumed tree height for the computer simulation. While this in no way could be considered appropriate for each tree, the degree of realism and accuracy gained through precise computer plotting of runs and terrain provides the best available image of what the Ski Incline proposal will look like.

COMMENT 3:

"Page 130: The second paragraph may imply that the Forest Service has made specific recommendations for this site, which is not the case.

"The assessment that the high ridge of the Carson Range will be visually enhanced by the ski runs is wrong, and rests upon a misunderstanding of visual assessment. There are cases in which visual variety can be introduced to an otherwise monotonous view of unbroken forest cover. Augmenting variety enhances the view, but this is not one of those cases: when seen from Stateline point or Mount Rose Highway there is ample variety already. It is created by the lake itself, by the light-to-heavy density of the timber stands, and by the many rock outcrops. It is simply untrue that the wild, pristine slopes of the Carson Range need to be 'enhanced' by ski runs."

RESPONSE:

The paragraph on page 130 noting Forest Service recommendations refers to a publication of planning and design guidelines issued by the Forest Service, agricultural Handbook No. 617, National Forest Landscape Management - Ski Areas, Volume 2, Chapter 7, June 1984. No implicit reference to specific Forest Service recommendations for this site is intended.

The reference in the same paragraph to "enhancement" is based on the TRPA evaluation ratings which for Ski Incline gives a higher rating to the existing ski area than to conifer forests, and so additional ski runs could enhance this rating. No portion of the EIS describes or implies the need for adding variety to the Carson Range, nor the merit

of Ski Incline meeting such a need. These conclusions must, by their nature, be left to the appropriate governing agency.

COMMENT 4:

"Page 131: The listed practices are variations on the theme of the 'feathered edge,' but sometimes, soft edges can't be used if there is a requirement to maximize wind deposition of snow or prevent wind scour. A 'hard edge' allow more snow depositions on the trails. When this need is evident, it takes precedence over esthetics.

"One important element -- perhaps the most important -- is missing entirely. The matter of soil color contrast. The treatment of the ground surface of the runs will have far more impact on the quality of the results than the edge treatments will have."

RESPONSE:

Conditions on the field will determine specifically what trees will be removed or left in place, but field research indicates that the practices listed and illustrated are both appropriate and practical for this area. The field research does not indicate any negative influences in orientation, prevailing wind direction or tree cover which suggests the need for hard trail edges.

Previous Ski Incline practices as well as mitigations required by the EIS and 208 BMP standards require revegetation of slopes where existing vegetative ground cover is disturbed. Such revegetation will make disturbed areas blend with existing vegetation because of color compatibility. It should be noted, however, that in the TRPA evaluation of Ski Incline of 1983, color contrast of exposed rock formations was seen as a very positive feature.

COMMENT 5:

"Page 162: Recreation impacts are only assessed from the viewpoint of 'activities in the village,' but the project would also break the longest roadless portion of the Tahoe Rim Trail with the summit road, lifts and Twin Lakes Lodge; a negative effect on summer backcountry recreation. Cross-country skiers seeking solitude along the ridge will doubtless also be affected."

RESPONSE:

It should be noted that the access road has been deleted from the Ski Incline proposal. The impacts of Tahoe Rim Trail activities caused by the Twin Lakes Lodge and lift terminals will be minimal in relation to the overall length and terrain of the trail. The Ski Incline summit is not the highest

point along the trail in this area, property boundary configurations do not allow the facilities to be placed in close proximity to the trail. Cross country skiers, as in other ski areas, could use the lift to get to the top and then proceed along the ridge for a beautiful ridge run.

COMMENT: STATE OF NEVADA, DEPARTMENT OF WILDLIFE

"In our review of the document we were unable to determine the extent of snowmaking by the project. Currently the water demand for snowmaking is 21 million gallons annually, and the proposed action requires an additional 23 million gallons per year. In order for the project to be in compliance with the Tahoe Regional Planning Agency's Policy stated on C-13, the water must be obtained from Lake Tahoe. The document does not state the source of the additional water for snowmaking."

RESPONSE:

Refer to the response to comment by the TRPA regarding water use and rights.

COMMENTS: STATE OF NEVADA, DEPARTMENT OF WILDLIFE

Page 85--Fisheries

Under Setting, 1st paragraph - Remove the following sentence: "The game fish are so called because they are more elusive than nongame fish and, when hooked, put up more fight to escape."
Remove "Eastern" from brook trout where it occurs.
Omit "Golden trout - Salmo aguabonita. They do not occur in the Tahoe Basin.
Scientific name for Kokanee salmon is: Onchorhynchus nerka (freshwater form).

Page 86

Under Brown Trout - omit the last two sentences: "In recent years a new strain of brown trout, called the Massachusetts, have been developed. It is somewhat less gamey than the regular brown trout and probably will be stocked generously in the future." (California and Nevada no longer have Massachusetts brown, and brown trout haven't been stocked recently).
Omit section on Golden Trout.

Page 88

Under Permit Area Setting - It's unlikely that brook trout would occur in Mill Creek from the mouth to 1/2 mile above, since the creek frequently dries up along this section in the summer.
Under Nongame Fish - Usually bullheads are referred to as game fish and the species for brown bullheads is Ictalurus nebulosus and not Leictalurus. Scientific spelling for golden shiner is Notemigonus crysoleucas. Lahontan mountain sucker is now called Mountain sucker, Catostomus platyrhychus, and no longer called Pantostcus lahontan.

Page 89

Under Existing Fishery - Brown trout, dace and suckers are known to occur.

Page 90

1st paragraph, last line - Nevada Department of Wildlife has worked with High Sierra Garden, Hyatt Tahoe and IVGID to improve the migration potential of Incline Creek.
Under Impacts, 3rd paragraph - The baffles for fish movement that were originally installed in the 2000 foot long culvert have never been maintained by Ski Incline. Some of the baffles are in disrepair.

Last line on page - Replace the words "fish ladder" with the word "baffles".

Page 91

1st line on page - Change "is" to "were".
Under Mitigation where the words "fish ladder" occur replace with the word "baffles."

Page 92

1st line on page - Change "excessive" to "any".

Page 95

Last paragraph, line 6 - Change "fishering" to "fisheries".

RESPONSE:

Each comment made above has been noted and revised in the Fisheries test, section 4.4.3, included in Errata B of the Final EIS.

COMMENT - NEVADA CLEARINGHOUSE COMMENTS BY DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

The Nevada Division of environmental Protection has stream water quality data since 1967 on West Fork Incline Creek at Highway 27 and Incline Creek at Lakeshore Drive for 22 parameters. Also see USGS open file Report 76-483, pp.14 entitled "Miscellaneous Hydrologic Data collected During a Reconnaissance of Streamflow and Fluvial Sediment Transport, Incline Village Area, Lake tahoe, Nevada, 1970-1793.

RESPONSE

The data identified in the comment is not site specific and reflects potential water quality impacts from highways, residential developments and the golf course. Also, the water quality data provided at these sites related to algal stimulants such as nitrogen phosphorus and iron are not consistent with the water quality standards for soluble phosphorus or nitrogen. Also, the reference USGS reports are not site specific.

COMMENT: TAHOE REGIONAL PLANNING AGENCY, APC

Clarify the requirements for and status of U.S. Army Corps of Engineers 404 permits for disturbance in a Stream Environment Zone.

RESPONSE:

Proposed disturbance in the SEZ at Ski Incline was presented to the Corps for review on August 25, 1986. At that time, the proposal called for permanent installation of all culvert and half-culvert in this area. The current proposal calls for seasonal removal of the half-culvert.

The Corps responded to the permanent culvert proposal with a letter and notification of permitting granted under a nationwide permit. A copy of this permit is included as Appendix C. The current proposal has not been submitted to the Corps for review, but as it is considered a lesser disturbance by the TRPA APC, it appears that the proposed work would again be allowed under the nationwide permit.

4. SUMMARY OF MITIGATIONS

4. SUMMARY OF MITIGATIONS

4.1.1 Topography

a. Temporary and permanent erosion control measures should be installed according to TRPA 208 EMP standards.

4.1.2 Geology/Seismology

a. In areas inaccessible from disturbed areas or in areas of steep grades, ski lifts will be placed with a helicopter to avoid having any heavy equipment or machinery on the slope itself. While this is an extremely expensive operation it is an environmentally acceptable procedure that is used currently all over the United States to install ski lifts and trams.

b. Logging associated with clearing of ski runs will take place in accordance with TRPA Standards for logging on sensitive lands. TRPA's draft Code of Ordinances (October, 1986) sets standards for tree removal, and requires that removal of trees in land capability districts 1a and 1c shall occur only by aerial removal, hand carrying, and use of existing roads, with no ground skidding. Over-the-snow skidding will be permitted on occasions when there are 12 or more inches of packed snow.

c. A snow safety plan and an avalanche hazard forecasting program will be implemented for the developed area and permit area to evaluate the hazard potential of the new area.

4.1.3 Soils

a. Over-the-snow logging, hand carrying, or helicopter logging will be utilized to remove the trees.

b. A helicopter will be utilized to install lift footings and lift towers where access cannot be gained from disturbed areas, or in areas of steep slopes.

c. Restrict grading of new ski trails to only those slopes to be equipped with snowmaking or to spot grading on trails as

depicted on the Mountain Development Plan (Appendix E), or as determined necessary to eliminate obstacles after operational experience has been gained.

d. A majority of the acreage will retain the natural ground covers and root systems of the logged areas (no earthwork).

e. Revegetation of slopes will be accomplished by seeding, mulching and stabilization. If it is necessary, a temporary irrigation system other than snowmaking lines will be installed to ensure rapid germination. Temporary and permanent erosion control and vegetation protection measures will be installed according to TRPA 208 BMP Standards. These measures are delineated in the detailed Plan of Construction to be submitted at permitting.

4.2.1 Floodways

a. Revegetate the areas stripped of vegetation. This mitigation effort will lessen future runoff by breaking up bare ground surfaces allowing increased infiltration and by slowing overland flow velocities and retarding natural canalization efforts.

b. Detention structures and basins will be required as part of the detailed Plan of Construction. They will reduce peak flows by increasing the runoff hydrograph characteristics of time to peak (rising limb) and the recession period. Lengthening of the runoff hydrograph allows a larger infiltration time period. Most detention measures result in an increase area of infiltration also.

4.2.3 Water Quality

a. Ski Incline shall develop a Plan of Construction that meets with TRPA and Nevada DEP approval. This plan shall fully describe the equipment, techniques, and design to be utilized for tree removal, construction of the trails, ski lifts and buildings. A complete set of erosion control plans and specifications must accompany this plan of construction.

b. All erosion control structures and practices shall be constructed with each phase of the project to ensure they are in place and functioning in concert with facilities construction. Temporary irrigation will be introduced for establishment of revegetated area if required.

c. All construction activities shall be outside of flowing waters, particularly in the SEZ. Measures to intercept surface or groundwater flow will be described in the Plan of Construction.

d. Incline Village shall develop an Operation and Maintenance Manual that describes in detail the operation of the erosion control structures, required maintenance, and maintenance schedule. This manual shall meet with the approval of the TRPA and Nevada DEP and ensure these facilities are functioning as designed.

e. IVGID will continue the existing water quality monitoring at a frequency that meets with TRPA and Nevada DEP approval.

f. Additional sites with identified erosion control problems include vertical embankments (existing road) which are actively sloughing and providing some hazard as a result of undercutting tall evergreen trees. Stabilization of these embankments and revegetation would include construction of a retaining wall at the slope toe or placement of riprap boulders and backfilling of the wall area to accommodate a replanting of vegetation.

g. Springs on ski slopes present a wet and sometimes eroding condition down slope. While such a problem is not of a critical nature, the problem of erosion is not the less apparent and should be addressed. It is suggested that the spring water, particularly on the higher slope areas along the ridge could likely be harnessed and used effectively through a collection, storage and irrigation system to supply irrigation for some of the ski slope areas. This would be very useful both in enhancing vegetative coverage over difficult and unvegetated areas presently demonstrating some erosion, and for

enhancing those areas which are at the present time mostly stabilized through existence of seeded grass species.

h. Mechanical trimming (pruning) of shrub species should be limited to a height of approximately 12 inches. This treatment potentially will encourage lateral growth and yet continue the erosion control characteristics of good ground cover. If it becomes necessary to remove any additional shrub species, an appropriate erosion control seed mix will be established by qualified specialists and be broadcast across the area to be treated prior to any work in the area. The application through broadcast seeding and the ensuing activity with equipment over the soil will assure placement and burying of seed which will result in plant stabilization following removal of the shrub species.

i. The seed mix which the Ski Incline area is using is a mixture which has been provided by the U.S. Forest Service technicians and includes the following species: Luna wheat grass, Potomac orchargrass, Sherman big bluegrass, Lincoln smooth brome, and Durar hard fescue. The use of these species is effective for erosion control in the area. However, the seed mix will be expanded to include both flowering forbes and nitrogen fixing legumes to add species diversity to the area as well as aesthetic quality by inclusion of flowering plants.

j. The detailed Plan of Construction will describe specific erosion control techniques for conveying runoff from the ski run interceptor ditches to safe outlet areas.

k. Utility and snowmaking equipment pipe trenches will be backfilled with native material (DG) and compacted in order to prevent conveyance of surface or ground water through the trench. Antiseepage collars may be required at selected sites.

4.2.4 Stream Environment Zone

a. The Plan of Construction required as a mitigation shall contain a specific section for construction and revegetation in the SEZ. The plan shall specify the following:

1. Limits of construction with heavy equipment for Type I and Type II improvements;

2. All flowing water shall be interrupted and piped around Type I (permanent full culvert) and Type II (winter seasonal half-culvert) improvements during installation;

3. Specific limits on vegetation removal or trimming shall be identified to insure regrowth;

4. Temporary erosion control measures will be specified, maintained and installed during construction. The Type II half-culvert improvements will seasonally be removed.

b. The SEZ and immediate upland area disturbed as a result of Type I and Type II improvement construction shall be revegetated immediately with adaptive species or site specific seed mixes.

c. IVGID will restore a SEZ in the amount of 1.5 times the SEZ disturbed (permanent full culvert) as a result of the implementation of the proposed plan. This replacement will occur as a restoration of a culverted stream under the Upper Ballroom trail. The restoration shall be conducted during construction of the project. The restoration site and design shall meet with TRPA approval.

d. IVGID will include in the Operation and Maintenance Manual identified in Section 4.2.3 a specific section on Type I and Type II improvements. Specific items to be addressed are trimming (pruning) of SEZ vegetation in Type II improvements using mechanical equipment and drainage structure maintenance in Type I improvements.

4.4.1 Flora

a. In areas inaccessible from disturbed areas, or in areas of steep grades, ski lifts will be placed with a helicopter to avoid having any heavy equipment or machinery on the slope itself. While this is an extremely expensive operation it is an environmentally acceptable procedure that is used currently all over the United States to install ski lifts and trams.

b. Logging associated with clearing of ski runs will take place in accordance with TRPA standards for logging on sensitive lands. TRPA's draft Code of Ordinances, Chapter 71 (October, 1986), sets standards for tree removal, and requires that removal of trees in land capability districts 1a and 1c shall occur only aerial removal, hand carrying, and use of existing roads, with no ground skidding. Over-the-snow skidding will be permitted on occasions when there are 12 or more inches of packed snow.

4.4.2 Fauna

a. As stated in the TRPA Goals and Policies, there exists considerable potential for improvement of both the wildlife habitat and at the same time the forest health and diversity. Mitigation measures include marking of trees that conform to USFS Snag Policy. Mapping of the deer areas and cooperation with interagency management plans will insure that better land use decisions will be made by the permit issuing agencies. The protection and improvement of meadows, shrublands, and aspen communities that provide critical fawning and feeding habitats is critical. A plan to work with the Nevada Department of Wildlife on improving the blue grouse habitat will be implemented.

4.4.3 Fisheries

a. Maintain the existing fish baffles in the 6 ft. culvert in good condition.

b. Ensure that bank stability is maintained on Incline Creek within the area of influence.

c. Bridge perennial stream courses. Use culverts only on intermittent streams and design them to prevent plugging and washouts.

d. Prohibit excessive stream flow diversions.

e. Work with Nevada Fish and game department and TRPA on programs and monitoring that may lead to enhancement of the fisheries.

f. The fishery potential of Mill Creek that is contained in the project boundaries will not be limited by excessive stream flow diversion, blockages that inhibit fish migrations or unstable stream banks and erosion of siltation problems. If any development occurs within the Mill Creek watershed, mitigation measures recommended for Incline Creek fisheries will be employed.

g. IVGID will work with the Nevada Division of Transportation and Fish and Game to construct a fish baffle at the culvert outlet under Fairview Blvd. This will enable fish migration to the upper portions of Incline Creek.

4.5 Transportation

a. An off-site location for tour bus parking (15 buses) has been identified and retained by Ski Incline.

b. The curb returns at Country Club Drive/Ski Way intersection could be improved to facilitate bus activity, if operational experience shows that to be necessary.

c. Tour bus activity will be staggered to spread arrivals/departures over a two hour period.

4.10 Visual Resources

Techniques to be employed in the design of ski runs shall include:

a. Glading of ski runs --
Several trails will be gladed through selective thinning of trees. This provides a very natural appearing slope due to the quantity and configuration of trees which are left.

b. Leaving large islands in the ski runs -- Several of the ski runs will retain large islands of trees.

c. Creating natural appearing edges on the ski runs --
The vegetation edge is extremely important. It is a key to maintaining the desired character and meeting visual quality objectives. Run edges should correspond to existing biological edges. The tree edge should undulate with a variety of trees and shrubs. The appearance should be loose and feathery avoiding hard straight lines.

d. Blending of lift lines within ski trails -- Lifts and trails should be integrated to avoid the strong line which results from aligning lifts through tree masses.

e. Colors used on the structures should blend easily with the natural environment -- Colors utilized on the smooth surfaces of structure should be two or three shades darker than those in the natural environment.

4.11 Cultural Resources

a. Lift towers will be located at a distance away from the flume that will ensure the integrity of the flume during lift construction.

b. Cut timbers will be removed from the ski trails either be aerial logging or during the winter months with an ample protective mantle of snow, or bucked up in small pieces and removed by hand.

c. Any previously unidentified archeological remains discovered or exposed during project operations should be afforded full protection until qualified personnel are able to assess the situation.

d. The incorporation of an interpretive program which reflects the rich historic heritage of the Incline area is highly recommended. Historic exhibits can be attractively and meaningfully displayed in the lodge and other facilities. Historic places and events can even be reflected in

the names of new lifts and ski trails. Ski Incline can set itself apart from other ski areas by capitalizing upon its unique historic circumstances. This will increase the historical awareness of visitors to the ski area and will serve to enhance the economic base of the resort.

4.12.1 Water

a. Revegetation of trenching disturbance will occur as prescribed for revegetation in the soils and water quality mitigations.

4.12.2 Wastewater Disposal

a. Revegetation of trenching disturbance will occur as prescribed for revegetation in the soils and water quality mitigations.

4.12.3 Refuse Disposal

a. Dumpster locations or increase pick up frequency will be increased to accommodate increased refuse production.

4.13 Energy

a. As required by law, all new structures and renovations will be designed to meet the above described standards.

5. ERRATA

NAC 445.13473
Water Quality Standards
Lake Tahoe

ph Units
Single Value ..... within range 7.0 - 8.4

Dissolved Oxygen - Percent of Saturation
Single Value ..... not less than 90.0

Chlorides - mg/1
Annual Average ..... not less than 3.0
Single Value ..... not more than 5.0

Soluable Phosphorus - ug/1
Annual Average ..... not more than 7.0

Total Soluable Inorganic Nitrogen - ug/1
Annual Average ..... not more than 25.0

Coliform Organisms - MPN/100 ml
A density not greater than the values shown in the following table:

	Median	Maximum
Undeveloped Lake Front Areas		
10 yards offshore	5.0	32.0
100 yards offshore	3.0	15.0
Developed Lake Front Areas		
10 yards offshore	240.0	700.0
100 yards offshore	15.0	64.0
Directly Influenced by Streams		
10 yards offshore	240.0	700.0
100 yards offshore	32.0	240.0

Temperature ° C
Permissible temperature increase above natural receiving water temperature ..... none

Algal Growth Potential - the mean annual algal growth potential at any point in the lake must be greater than twice the mean annual algal growth potential at a limnetic reference station and using analytical methods determind jointly with the Environmental Protection Agency, Region IX.

Plankton Court - number per ml
Average (June through September) ..... not to exceed 100.00
Single Value ..... not to exceed 500.00

Specific Electrical Conductance 0 ~~micro-ohms~~ "micromhos" per cm at 20
Annual Average ..... not to exceed 95.0
Single Value ..... not to exceed 105.0

Clarity - The vertical extinction coefficient of less than 0.08 per meter when measured at any depth below the first meter and a turbidity less than 3 Jackson Units at any point of the lake too shallow to determine a reliable extinction coefficient.

Errata B

decisions will be made by the permit issuing agencies. The protection and improvement of meadows, shrublands, and aspen communities that provide critical fawning and feeding habitats is critical. A plan to work with the Nevada Department of Wildlife on improving the blue grouse habitat should be implemented.

4.4.3 FISHERIES

Setting:

Species of fish in the Lake Tahoe Region may be classified conveniently as game and nongame fish. ~~The game fish are so called because they are more elusive than nongame fish and, when hooked, put up more fight to escape~~. The species of game fish in the Lake Tahoe Region and their distinguishing characteristics are set forth below. The game fish in this area are:

Brown trout	Salmo trutta
~~Eastern~~ brook trout	Salvelinus fontinalis
~~Golden trout~~	~~Salmo aguabonita~~
Kamloops rainbow trout	S. gairdneri kamloops
Kokanee salmon	Onchorhynchus nerka ~~kennerlyi~~
Lahontan cutthroat trout	Salmo clarki henshawi
Lake trout	Salvelinus namaycush
Mountain whitefish	Prosopium williamsoni
Rainbow trout	Salmo gairdneri

The rainbow trout are a self-sustaining population, probably descendants of steelhead rainbow trout (Salmo gaidneri gairdneri) and Shasta rainbow trout (S. gairdneri stonei). Kamloops rainbow trout were planted in recent years. Limited monitoring of the Basin fishering dates back to only 1960 so there is no long term trend information available. Creek census conducted by the Nevada Department of Wildlife generally show a decreasing trend of angler success and increased proportion of smaller fish. The trend information that is available (California and Nevada Department of Fish and Game, 1962-1965, Frantz 1966-1981) indicates that the lake trout catch is generally decreasing in size and that they are getting harder to catch. The spawning runs of kokanee salmon have declined

and it is felt spawning runs of other fishes have likewise declined.

The species of game fish in the Lake Tahoe Region and their distinguising characteristics are set forth below.

Game Fish:

Brown Trout

The brown trout was probably introduced into the Tahoe Region early in the 1900's. They can tolerate warmer water temperatures than other trout and are ideally suited to lower elevation streams. Since they spawn in the fall, the other fish they may compete with for spawning habitat are kokanee salmon and eastern brook trout. ~~In recent years a new strain of brown trout, called the Massachusetts, have been developed. It is somewhat less gamey than the regular brown trout and probably will be stocked generously in the future.~~

~~Eastern~~ Brook Trout

The original range of the ~~eastern~~ brook trout was the northeastern portion of the North American continent from the Great Lakes states to the Atlantic Ocean. This species was introduced into the Tahoe Region in 1888. It is ideally suited to high mountain lakes and streams and is chiefly found there today. Brook trout spawn in the fall and, like the lake trout, can spawn in standing waters.

~~Golden Trout~~

~~The golden trout is a native Californian, but not in the Tahoe Region. It spawns from May through July and readily hybridizes with rainbow and cutthroat trout. This species is so popular with anglers that many fishermen hike to remote areas to test their skill against it.~~

Kamloops Rainbow Trout

The kamloops trout is a subspecies of rainbow trout capable of growing quite large in lakes that have an abundant supply of food. It was introduced into Lake Tahoe in 1956 as fingerlings.

In 1961, 100,000 catchable-sized fish were stocked. The kamloops require the same habitat as the rainbow trout.

Kokanee Salmon

Kokanee salmon, a landlocked form of sockeye salmon, was introduced into Lake Tahoe in 1944. Although difficult to catch, the kokanee has become popular in larger lakes and reservoirs. Kokanee feed primarily on zoo plankton, but larger fish take aquatic insects and sometimes small fishes. The kokanee is a true salmon in that its death occurs soon after spawning. It spawns in the fall in the Lake and its tributaries (chiefly in Taylor Creek) and competes with brown and brook trout where spawning habitat is limited.

Lahontan Cutthroat Trout

Cutthroat is the only trout species native to the Tahoe Region. It spawns in the spring. Its population has been greatly depleted by changes in its natural habitat, by competition, and by hybridization with the rainbow.

Lake Trout

The lake trout, or mackinaw, along with brook trout, belongs to the Char group of the salmon family and was introduced to the Lake Tahoe Region in 1889. It is now the dominant game fish caught from the Lake and its ideal habitat is large, deep, well oxygenated lakes that maintain water temperatures below 55 degrees F. Spawning occurs in the fall.

Mountain Whitefish

The mountain whitefish, which is related to the trout, is native to the Truckee River drainage. It is silver-colored with a light brown to bluish back. It has a much smaller mouth than trout, but larger scales. This fish spawns in the fall in gravel riffles. Whitefish are good to eat, but anglers unfamiliar with the species sometimes discard them.

Rainbow Trout

The rainbow evidently originally occurred on the Western slope of the Sierra Nevada, but the white man has stocked it in lakes and streams throughout the crest and east slope. Rainbow trout normally spawn in spring and are easily raised in captivity. Hatchery-reared rainbows of catchable size are caught very easily; about 50 percent usually are taken within 12 days after a stream or lake is stocked.

Permit Area Setting

The surrounding U.S. Forest Service permit area to the north and south of the IVGID Ski Incline property contain watershed for both Incline Creek and Mill Creek fisheries. Fisheries of Incline Creek were discussed in the previous section. The southern permit area is part of the headwaters for Mill Creek. The distribution of fish in Mill Creek are limited ~~to Eastern Brook Trout which are resident fish and are located only in the lower section of the creek from one half mile to one mile from the mouth of the creek.~~ since the creek flows are seasonal.

Planting Project

In a bi-state study of Lake Tahoe fishery in the early 1960's, an experimental planting program tested various sizes and strains of trout for stocking. Results of this study led to the present management program of annual planting of 35,000 pounds of large (about 12 inches) trout. Planting of fingerlings and small catchables proved to be unfeasible because of poor rates of survival. The limited supply of food in Lake Tahoe and other high alpine lakes probably is the most important factor controlling production of game fish.

Nongame Fish:

The species of nongame fish in this area are:

~~Brown bullhead~~	~~Leictalurus nebulosus~~
Golden shiner	Notemigeonus crysoleuscias
~~Lahontan~~ mountain sucker	Catostomus platyrhynchus ~~Pantosteus lahontan~~
Lahontan redside	Richardsonius egregius
Lahontan speckled dace	Rhinichthys osculus robustus
Mosquito fish	Gambusia affinis
Piute sculpin	Cottus beldingii
Tahoe sucker	Catostomus tahoensis
Tui chub	Gila bicolor

Existing Fishery

Species	Occurrence	Distribution	Migration
		Approximate	Pattern
~~Eastern~~ Brook Trout	Known	From mouth to 3 miles	Resident
Brown Trout	~~Probable~~ Known	Lower Section	Migratory
Rainbow Trout	Known	From mouth to 3 miles	Resident and migratory
Kokanee Salmon	Known	Lower Section	Migratory
Lahontan Red-Side	~~Probable~~	Lower Section	Migratory
Dace	~~Probable~~ Known	Lower Section	Migratory
Tui Chub	Probable	Lower Section	Migratory
Sucker	Probable Known	Lower Section	Migratory

Thresholds:

The thresholds state the evaluation process for fisheries was focused on habitat. The proposed project is located within the watershed of Incline Creek, which is mapped as a good quality migratory stream on the lower section and is mapped as good resident quality stream on the upper section. The southern permit area which is in the watershed for Mill Creek is mapped as a marginal resident quality stream.

The recommended thresholds for Incline Creek is that the good stream habitat be maintained. While it was found in the thresholds that a fishery potential of a stream was limited by a combination of excessive stream flow diversions, blockages that inhibit fish migration, unstable stream banks, and erosion and siltation problems, none of these are apparent factors in the upper section of Incline Creek that falls within the influence of proposed project area.

Most of the factors that limit the fisher potential of Incline Creek have occurred on the lower sections from the shoreline to Fairview Blvd. Nevada ~~Fish and Game~~ Department of Wildlife has worked with High Sierra Gardens, Hyatt Tahoe, and IVGID ~~the Nevada Division of Transportation~~ to improve the migration potential of Incline Creek.

Impacts:

Alternatives #1 and #2 will have no impacts on the existing fisheries. Alternative #3 will not involve excessive stream flow diversions or building of any blockages that inhibit fish migration. The proposed winter use on the Mill Creek watershed area, in which trail development is minimal should have no impacts to the fisheries. The proposed access road impacts on the fisheries of Mill Creek and Incline Creek should be minimal if the proposed mitigation measures are employed.

If the TRPA Best Management Practices are used for any disturbances that may place silt loads that exceed the flushing capacity of the stream, the problems of unstable stream banks and erosion and siltation will not impact the existing fisheries of Incline Creek.

The 6' culvert that extends under the entire length of the existing ski area parking lot channels Incline Creek for approximately 2000 feet then opens into the natural stream environment zone for several hundred feet before entering another culvert that crosses the intersection of Fairview Blvd. The culvert at Faiview Blvd. then drops Incline Creek into a stream environment zone which begins below the roadway. The culvert protrudes out several feet from the embankment dropping Incline Creek several feet down to rock rip-rap before entering the principal stream channel.

Incline Creek is mapped as a good quality resident stream on the upper section in the TRPA thresholds. In conversation with locals,, there have been fishing on the upper portion of Incline Creek above the ski area in the past but the resident fish population has decreased significantly in recent years. This decrease seems to correspond with the installation of the culvert at Fairview Blvd. after the previous one was consumed by the flows from the winter of 1982. It appears that while large seasonal flows take more and more resident fish downstream, the impassable drop on

the downstream end of the Fairview Blvd. culvert has prevented fish from migrating up to the fish ~~ladder~~ baffles that ~~is~~ were installed in the culvert under Ski Incline and then to the upper portions of Incline Creek. This is resulting in the degradation of the resident fisheries of Incline Creek.

The alternative of removing the 2000' culvert and restoring Incline Creek's stream environment zone to its natural state would eventually improve the quality of the stream for fish habitat but would have several problems:

1. The disturbance that the massive removal and restoration would cause may very well off-set any benefit of upgrading the stream from good to excellent status.
2. Even if the culvert was removed and the stream environment zone restored, the problems of migration blockages downstream would prevent any species from using the restoration project.
3. The removal and restoration of the stream would preempt any of the proposed alternatives presented and could cause the operation of the ski area and its maintenance to cease.

Mitigation:

Recommendations for Alternative #1 or Alternative #2 would be to maintain current water quality plan, maintain in functioning condition the fish ~~ladder~~ baffle that is in the 6' CMP, and monitor Incline Creek for degradation.

Recommendations for alternative #3 consist of:

Maintain the existing fish ~~ladders~~ baffles in it's 6 ft. culvert in good condition.

Ensure that bank stability is maintained on Incline Creek within the area of influence.

Bridge perennial stream courses. Use culverts only on intermittent streams and design them to prevent plugging and washouts.

Confine these vehicles to roadways designed and maintained to accept this use without causing erosion.

Prohibit excessive stream flow diversions.

Work with Nevada Fish & Game department and TRPA on programs and monitoring that may lead to enhancement of the fisheries.

The fishery potential of Mill Creek that is contained in the project boundaries is not limited by, excessive stream flow diversion, blockages that inhibit fish migratins or unstable stream banks and erosion of siltation problems. If any development occurs within the Mill Creek watershed, mitigation measures recommended for the Incline Creek fisheries should be employed.

Revegetate slope cuts required for the access road with a seed carrying mulch. If necessary, temporary irrigation should be installed to insure rapid establishment of vegetation. State of the art erosion control measures should be used to assure establishment of vegetation.

IVGID will work with the Nevada Division of Transportaion and Fish and Game to construct a fish ~~ladder~~ baffle at the culvert outlet under Fairview Blvd. This will enable fish migration to the upper poritions of Incline Creek.

4.5 TRANSPORTATION AND CIRCULATION

Setting:

Traffic conditions in the Incline Village area are predicated on the availability of regional transportation facilities and on seasonal variation in travel demand. State Route 28 is the major transportation facility serving Incline Village. State Route 28 is a two lane roadway extending from the US 50 junction to the south through Incline Village to the California State line and ultimately to a junction with State Route 89 in Tahoe City. State Route 431 (Mt. Rose Highway) connects Incline Village with the Reno area. State Route 431 is a two lane roadway running from a junction with SR 28 to a junction with US 395 south of Reno.

6. APPENDICES

APPENDIX A

LAKE TAHOE BASIN
SCENIC RESOURCE EVALUATION
1983

Prepared for
THE TAHOE REGIONAL PLANNING AGENCY

by
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Urban and Environmental Planning
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November 1983

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I. INTRODUCTION

The Lake Tahoe Basin is famous for its natural beauty. Each year thousands of new residents are attracted to the basin by its high scenic quality, and many thousands more come from around the world to view this distinctive alpine lake ringed by mountain peaks. Residents and visitors agree that the scenic quality of the area is one of its most important natural resources. As the pressures of growth have increased in the basin, so has the awareness that its high scenic quality is a fragile resource which needs protection. The present study is conceived as a means to provide some of that protection.

The Lake Tahoe Basin Scenic Resource Evaluation-1983 was undertaken as a supplement to the Environmental Threshold Study adopted in Resolution #82-11 by the governing board of the Tahoe Regional Planning Agency in 1982. The Scenic Resource Threshold, one of the components of that study, established numerical standards for the scenic quality of lands visible from the major roadways in the basin and from the lake itself. In addition, the Threshold proposed that adequate protection of the scenic resource would require scenic management standards to be developed for other areas in the basin. It specifically cited public recreation areas and bicycle paths as areas to be addressed, and stipulated that any standards for such areas should follow the precedent of the threshold study and be numerical in nature. The purpose of this study then, as directed by the adopted threshold study, is to evaluate the quality of the scenic resource in the Lake Tahoe Basin as viewed from public recreation areas and bicycle paths, and to represent the findings as a numerical standard which will act as a mechanism for the protection of identified resources and a means of monitoring change in those resources.

The Lake Tahoe Basin has extensive facilities for year-round outdoor recreation. These facilities, along with the major travel routes, are the areas from which the majority of the public, both residents and visitors, will most likely view the scenic resource. In addition, recreation facilities are often located in areas of high scenic quality or are associated with unique scenic features. Scenic resource management is thus doubly important in recreation areas since decline in scenic quality will not only affect the large numbers of people who use them, but will often affect those areas with the highest scenic quality.

Thirty-seven recreation areas are included in this study. These include parks, beaches, picnic areas, and campgrounds. Also included are the public areas of the five alpine ski resorts in the basin. The bicycle portion of the study includes Class I and II bicycle paths that are separated from the major roadways, or Class II bicycle ways with clearly marked rights-of-way. These recreation areas are operated by various city, county, state, and federal agencies. They were selected primarily from the "Inventory of Recreation Resources in the Lake Tahoe Basin" conducted by the South Lake Tahoe Recreation Department and the Eldorado County C.E.T.A. All areas selected are either publicly owned and operated or publicly owned and operated by private concerns. The exceptions are the ski areas, most of which are privately owned and operated.

The aim of this study was to evaluate those recreation areas which serve the greatest number of people. Some recreation areas are not included in the study because characteristics such as difficult access limit the number of users. Many campgrounds in remote or wilderness areas fall into this category and are not included in the study.

The study is meant to augment the information obtained in the Scenic Threshold Study and has therefore been closely modeled after it. The values and basic premises defined for that study also hold true for this one. The main premise is that the natural landscape is the dominant scenic resource and should be maintained or enhanced. Additionally, the aesthetic characteristics of the man-made environment should be maintained or improved to be compatible with the natural environment.

The scope of work in the threshold study focused primarily on identification and evaluation of the scenic resource for the purpose of setting numerical standards, which would then be maintained by implementation measures to be developed by the Regional Plan. Emphasis was placed, therefore, on the natural rather than the man-made landscape, and on identification of the resource rather than steps to protect it. As in the threshold study, the emphasis of this study is protection of the natural landscape from further scenic degradation. The identification of the scenic resource components and the establishment of numerical standards is again the core of the study; however, as part of the Regional Plan effort, this study assesses the man-made landscape and proposes specific planning guidelines that will implement the recommended protection of the scenic resource.

The study was designed to be an active planning tool which could be incorporated into the daily decision-making process that determines the future look of the basin. The concern was to develop a system that would describe the scenic resource from a practical planning standpoint and provide guidelines for preserving or improving that resource.

II. RECREATION AREAS

A. METHODOLOGY

The methodology of this study has adopted many of the principles and procedures used in the threshold study, although changes have been made to accommodate differences in the viewer's position. In the threshold study the inventory and evaluation of the scenic resource were based on travel route segments (i.e. shoreline and roadway units), with the viewer moving through the landscape in either a car or boat. The viewer's position and the scenic units were transient and constantly changing. In the present study the scenic units are made up of the recreation areas, and in contrast to the roadway and shoreline units, are separate, well-defined, and static. The viewer thus has more time to take in the scenery and can therefore see more detail and make finer distinctions. Another effect is that the viewer's surroundings play a more important role in the viewing experience. The study's evaluation system responds to these new conditions.

The study's methodology has three phases: resource inventory, resource evaluation, and policy formulation. In the resource inventory phase, field surveys of each recreation area were conducted to identify the elements of the scenic resource (see Appendix A). The individual subcomponents that comprise the scenic resource were mapped, photo-documented, and described in narrative text. This inventory documentation will act as a baseline of the existing 1983 resources which can be referenced when changes in the status of the resource area are contemplated.

The subcomponents that comprise the scenic resource as seen from the public recreation areas are:

1. Views of the lake and natural landscape from the recreation area
2. Special landscape features, such as streams, beaches, and rock formations, that add interest and variety to the views
3. Man-made features of the recreation area that influence the viewing experience

The first two categories of subcomponents respond to the natural elements in the landscape. Both categories were also used in the threshold study. The third category responds to the built environment within the recreation area and has been added to account for the effect of the viewer's context upon the viewing experience. Since the viewer is stationary, or nearly so, within the recreation area, much greater attention is paid to the immediate environment. The viewer's surroundings become an integral part of the viewing experience, influencing the overall sense of scenic quality (e.g. viewing a scene from a crowded parking lot and viewing it from a secluded beach are very different visual experiences). This category was included to reflect the visual impact that the man-made elements within the recreation area have on the viewer.

In the resource evaluation phase of the study, scenic quality ratings based on sets of visual criteria were assigned to each subcomponent. The purpose of these criteria is to allow comparative evaluations of the scenic resources within each recreation area and among the different recreation areas, and to make possible recommendations for maintaining and improving the scenic quality of the area.

Five criteria were used to evaluate the scenic quality of the subcomponents in the "views" and "natural features" categories. These five criteria are (1) unity; (2) vividness; (3) variety; (4) intactness; and (5) uniqueness. The first four criteria, which were used in the threshold study and many other scenic resource studies, are generally standardized criteria for evaluating landscape quality.

Unity can be expressed in a landscape by a dominant land form with coordinated, subordinated surrounding parts, by a single well-defined enclosure, or a set or series of strong features. A unified landscape is one in which the visual resources join together to form a single, coherent, harmonious visual unit. Vividness can be expressed by contrasting elements, such as color, line, and shape, marked differences in related elements or repetition of similarities. The visual quality of vividness can also be described as distinctiveness. Variety usually refers to numerous or different parts seen together. Variety can also be described as richness. Intactness describes the degree to which a landscape retains its natural condition, or the degree to which modifications emphasize or enhance the natural condition of the landscape.

The fifth criterion, uniqueness, was introduced to create another level of examination which leads to a more sensitive evaluation of the resource. Uniqueness expresses the frequency with which certain landscape characteristics occur. Subcomponents with a high uniqueness rating have characteristics which are unique or unusual and would rarely, if ever, be encountered in another landscape setting. In an area such as Lake Tahoe where the overall scenic quality of the landscape is so high, this criterion helps to make distinctions between landscapes possessing high scenic value but relatively common individual characteristics, and those landscapes possessing both high scenic value and highly unusual or distinctive characteristics.

Scenic quality ratings for the man-made features of the recreation area are based on a set of four visual criteria. These criteria were selected because they specifically respond to the visual character of the built environment rather than the natural environment. The four criteria for evaluation of the scenic quality of the man-made features are (1) coherence; (2) condition; (3) compatibility; and (4) design quality. Coherence describes the degree of relationship between man-made elements that is visually apparent. A coherent built environment is one in which all the man-made elements have some characteristic or quality which visually unifies them into a harmonious whole. Some of the elements that can affect coherence are architectural style, building materials, color, massing, and siting. Condition refers to the physical status of a man-made element. It reflects the amount of care that has gone into the construction and maintenance of the facility. Compatibility refers to the ability of the man-made element to co-exist with the natural landscape without detracting from it. Man-made elements that are highly compatible blend into their surroundings and defer to the forms, colors, and textures of the natural landscape. Design quality refers to the degree of visual interest inherent in a man-made element due to its built character. An element with high quality design appeals to the eye because of the uniqueness or care exhibited in its form, massing, detailing, and/or materials.

Each subcomponent was evaluated against each of the criteria (either four criteria or five depending on the subcomponent category) and assigned a numerical rating between one and five. These ratings are intended to express comparative scenic quality ratings of high, moderate, and low values, and should not be mistaken for absolute measurements of scenic quality. A rating of five indicates high scenic quality; a rating of four indicates good scenic quality; a rating of three indicates moderate scenic quality; a rating of two indicates fair scenic quality; and a rating of one indicates poor scenic quality (see Appendix B).

After the subcomponent was evaluated against each of the criteria, the total score, i.e. the sum of the criteria, was translated back into a subcomponent composite score of one to five. The ratings for all subcomponents within each category were totaled and translated into a composite rating for the overall category of subcomponents, i.e. a composite score for views, a composite score for natural features, and a composite score for man-made features. The ratings for the views and natural features categories were then combined. The composite rating achieved by this step is an overall rating for the natural landscape. As noted, the natural environment accounts for the high scenic quality of the basin, and the primary factor responsible for its degradation is the man-made environment. This method of combining the ratings allows comparison of these two elements, the natural and the man-made, that comprise the viewed environment. Table I shows an example of the rating procedure for the Zephyr Cove recreation area. Table 3 shows the composite scenic quality ratings for each of the recreation areas.

In the third element of the study, policy formulation, recommendations and guidelines for the protection and improvement of the scenic resource as viewed from the recreation areas were developed. This procedure had two steps, the first of which was the identification of factors which contribute to and detract from the scenic quality. The purpose of this step was to provide a list of specific data to bridge the gap between the abstract numerical standards and the concrete information required to make site-specific planning decisions. This step specifies those landscape elements which require protection and those which require mitigation.

The second step was the actual formulation of guidelines for the protection or improvement of the scenic quality of each recreation area. These guidelines fall into two categories: those which recommend actions external to the recreation area and those which recommend actions within the recreation area itself. Those guidelines dealing with lands external to the recreation area are planning oriented and are proscriptive in nature. They are meant to be tools to aid planning agency staffs in the protection of existing resources. These guidelines have been organized according to areas that present a shared set of landscape characteristics as viewed from the recreation area. The second set of guidelines is more design oriented and is meant to assist those agencies responsible for the recreation areas by suggesting ways to improve the scenic quality of the recreation area through maintenance, rehabilitation and redesign of existing facilities.

Table 1
SUMMARY OF RATINGS FOR RECREATION AREA #2 (ZEPHYR COVE)

Subcomponents	Criteria					Subcomponent Total	Subcompon Composite
	Unity	Vividness	Variety	Intactness	Uniqueness		
Views							
2-1	5	4	3	2	4	18	4
2-2	5	4	4	4	4	21	4
2-3	5	3	4	3	4	19	4
					Overall Rating:	58	4
Natural Features							
2-4	4	4	3	4	3	18	4
2-5	3	3	3	4	4	17	3
2-6	4	4	3	4	4	19	4
					Overall Rating:	54	4
					Combined Rating[b] for Views and Natural Features	112	4

Subcomponents	Criteria				Subcomponent Total	Subcomponen Composite[c]
	Coherence	Condition	Compatibility	Design Quality		
Man-Made Features						
2-7	1	2	1	1	5	1
2-8	2	2	1	1	6	2
2-9	3	3	4	3	13	3
2-10	2	2	2	2	8	2
				Overall Rating:	32	2

[a]Total Scores — Composite Scores

25.0 - 22.5	=	5	High
22.4 - 17.5	=	4	Good
17.4 - 12.5	=	3	Moderate
12.4 - 7.5	=	2	Fair
7.4 - 1.0	=	1	Poor

[c]Total Scores — Composite Scores

20 - 18	=	5	High
17 - 14	=	4	Good
13 - 10	=	3	Moderate
9 - 6	=	2	Fair
5 - 1	=	1	Poor

[b]Combined Rating = (Subcomponent Total)/(No. of Subcomponents)

B. INVENTORY AND EVALUATION OF RECREATION AREAS

The public recreation areas of the Lake Tahoe Basin were surveyed in June, July, and September of 1983. Scenic resources visible from each recreation area were mapped, photographed, and described in narrative text. The resource components that were identified, mapped, and photographed include: (1) views of the lake and natural landscape from the recreation area; (2) special landscape features, such as streams, beaches, rock formations, topographical features, and special vegetation patterns or areas; and (3) man-made features within the recreation area.

The thirty-seven recreation areas are arranged in the order they would be seen in a counterclockwise drive around the lake starting at Nevada Beach on the east shore of the lake (see Table 2 and Figure A). The narrative on each recreation area begins with a brief description of the scenic character of the area followed by a list of the identified features and their individual and combined numerical ratings. These features are keyed to the "Scenic Resources" map of the area and each feature is also keyed to color slides. The next section divides the major elements that comprise the scenic resource into two categories: elements that contribute to the scenic quality and elements that detract from the scenic quality. This is followed by recommendations for preserving or upgrading the scenic quality of the recreation area. These recommendations relate to specific portions of the scenic viewshed which are delineated on the "Visually Sensitive Areas" maps.

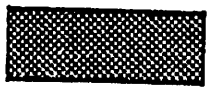
SCENIC RESOURCES MAPS LEGEND

Panoramic View

Forested Area

Beach

VISUALLY SENSITIVE AREAS MAPS LEGEND



Recreation Area

Visually Sensitive Area

Table 2
RECREATION AREAS

Area No.	Area Name
1	Nevada Beach
2	Zephyr Cove
3	Cave Rock
4	Sand Harbor
5	Hidden Beach
6	Ski Incline
7	Incline Beach
8	Burnt Cedar Beach
9	Kings Beach
10	Moondunes Beach
11	Agatam Beach
12	Patton Beach
13	Lake Forest Beach
14	Lake Forest Campground and Boat Launch
15	Tahoe State Recreation Area
16	Tahoe City Commons Beach
17	Granlibakken Ski Resort
18	William Kent Beach and Campground
19	Kaspian Picnic Area and Campground
20	Homewood Ski Resort
21	Tahoe Ski Bowl
22	Sugar Pine Point State Park
23	Meeks Bay Resort
24	Meeks Bay Campground
25	D. L. Bliss State Park
26	Vikingsholm/Emerald Bay
27	Eagle Falls Picnic Area
28	Eagle Point Campground
29	Fallen Leaf Lake Campground
30	Baldwin Beach
31	Taylor Creek
32	Kiva Picnic Area/Tallac Historic Site
33	Camp Richardson
34	Pope Beach
35	Reagan Beach
36	El Dorado Beach and Campground
37	Heavenly Valley Ski Resort

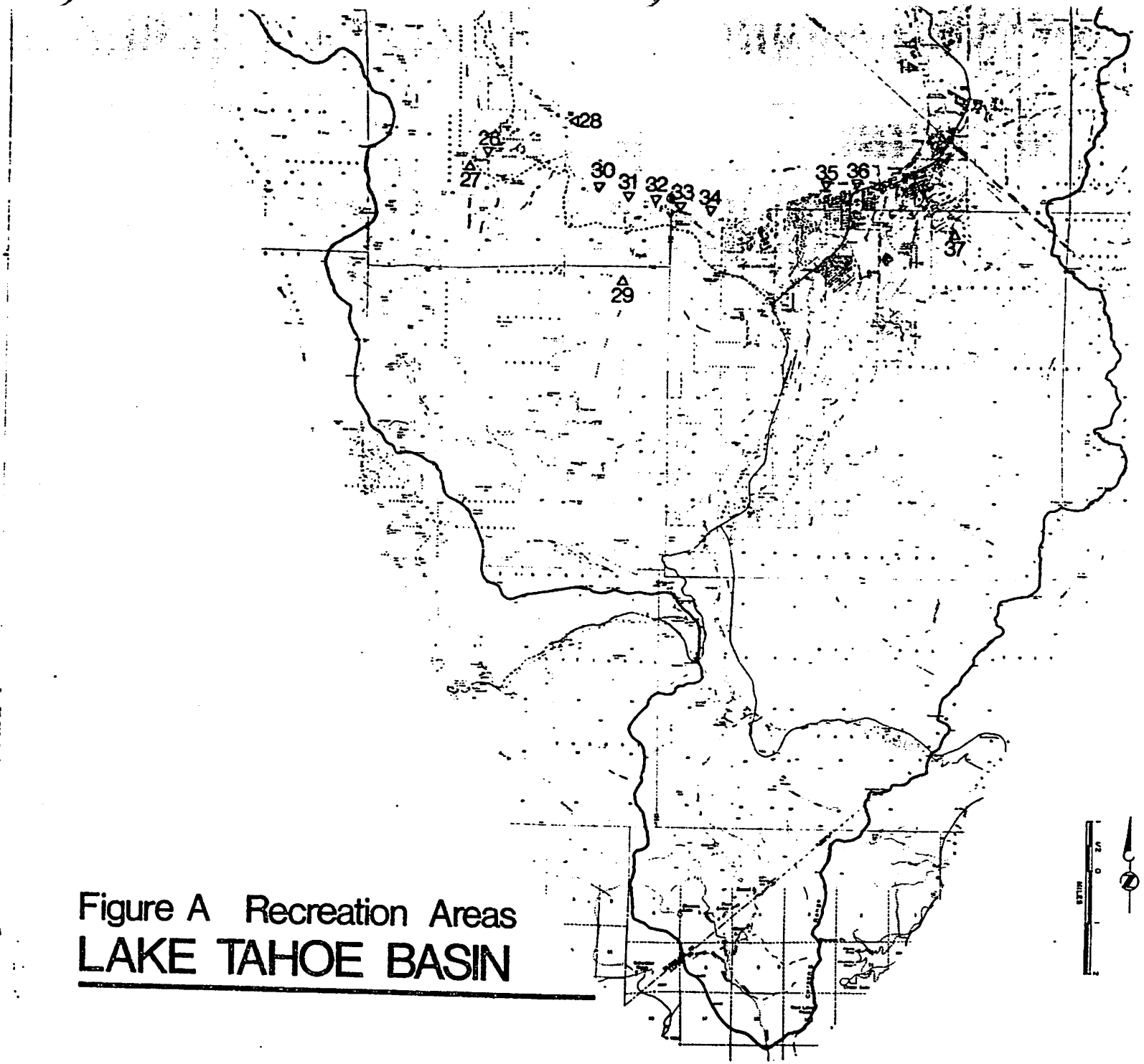


Figure A Recreation Areas

LAKE TAHOE BASIN

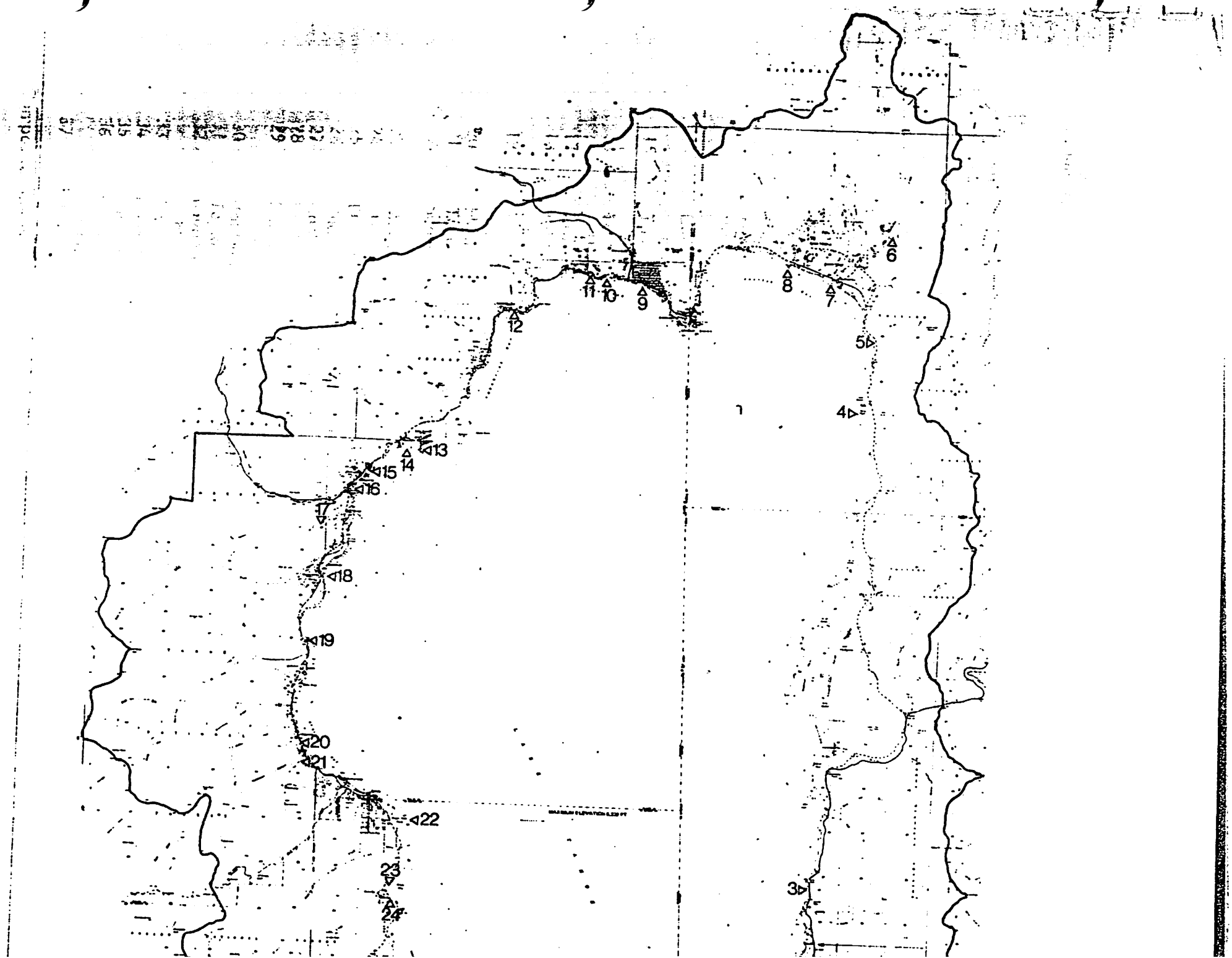

1
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Table 3
SCENIC QUALITY RATINGS FOR PUBLIC RECREATION AREAS

Recreation Area No.	Recreation Area Name	Overall Rating: Views	Overall Rating: Natural Features	Combined Rating: Views and Nat. Feat.	Overall Rating: Man-Made Features
1	Nevada Beach	4	4	4	3
2	Zephyr Cove	4	4	4	2
3	Cave Rock	4	3	4	3
4	Sand Harbor	4	4	4	4
5	Hidden Beach	4	4	4	NR
6	Ski Incline	3	4	3	3
7	Incline Beach	3	3	3	3
8	Burnt Cedar Beach	3	3	3	4
9	Kings Beach	3	3	3	3
10	Moondunes Beach	4	3	3	3
11	Agatam Beach	3	2	2	2
12	Patton Beach	3	3	3	2
13	Lake Forest Beach	4	4	4	2
14	Lake Forest Campground and Boat Launch	3	3	3	3
15	Tahoe State Recreation Area	3	3	3	3
16	Tahoe City Commons Beach	4	3	3	3
17	Granlibakken Ski Resort	3	3	3	4
18	William Kent Beach and Campground	3	3	3	3
19	Kaspian Picnic Area and Campground	3	3	3	4
20	Homewood Ski Resort	2	2	2	2
21	Tahoe Ski Bowl	3	3	3	4
22	Sugar Pine Point State Park	3	4	4	4
23	Meeks Bay Resort	4	3	3	3
24	Meeks Bay Campground	3	3	3	3
25	D. L. Bliss State Park	4	4	4	4
26	Vikingsholm/Emerald Bay	4	4	4	3
27	Eagle Falls Picnic Area	5	5	5	3
28	Eagle Point Campground	5	4	4	4
29	Fallen Leaf Lake Campground	5	5	5	4
30	Baldwin Beach	4	4	4	3
31	Taylor Creek	5	4	4	NR
32	Kiva Picnic Area/Tallac Historic Site	4	4	4	4
33	Camp Richardson	3	3	3	1
34	Pope Beach	4	4	4	4
35	Reagan Beach	3	2	3	3
36	El Dorado Beach and Campground	3	3	3	3
37	Heavenly Valley Ski Resort	3	3	3	2

Composite Scores: 5 = High; 4 = Good; 3 = Moderate; 2 = Fair; 1 = Poor.

6. SKI INCLINE

The Ski Incline resort is located on the north shore of the lake about three-quarters of a mile north of Highway 28 on Ski Way. The resort is privately owned and operated and its facilities include six ski lifts. The resort is in a bowl enclosed on three sides by hills. The fourth side, through which entry is gained to the ski area, drops away revealing a glimpse of the lake and west shore to the southwest. The bowl is open enough to allow the ridge line to be seen around the entire perimeter. Conifer forest covers most of the hillsides, but is not uniformly dense. To the north and east where the trees thin somewhat, light-colored rock can be seen as the base material. This light, almost white, rock substrate is particularly evident along the west side of the entry road where grading has exposed steep slopes of bare rock. The vegetation on the ski slopes themselves consists of grasses and low-growing scrub. The clearing of the slope to accommodate skiing has avoided sharp, straight lines along the edges of the ski area so the slopes have a more natural appearance than many ski areas.

The entire layout of the resort area is visible at a glance upon entry to Ski Incline. The main parking lot occupies the first area. This lot is situated at the lowest level with the main lodge occupying a terrace at the far end. One can enter this lot directly or stay on the entry road which skirts the lot and goes to the upper level and the entrance to the lodge. The five buildings that make up the resort complex all have been built in an "alpine/Tyrolean" style architecture so that, while widely spaced, they still read as parts of the whole. The maintenance building is at one end of the parking lot along with another building associated with one of the lifts. A building that houses pumps and other mechanical equipment is on the upper level along the road, as is another smaller structure at the entrance to the upper lot. The ski slopes are all on the hillsides east of the lodge and parking areas. West of the roadway and the resort area, the hill rises steeply. Several "Tyrolean" style houses can be seen on this slope that faces the ski slopes. They all are multi-story and sit quite high on the slope, and most utilize bright primary colors as accents. As a result they are not well concealed by the existing vegetation.

Ski Incline--Components

Views from the Recreation Area

6-1. View from deck at rear of lodge (Photos #12-18)
Rating: 4

6-2. 360 degree panorama from parking area in front of lodge (Photo #26-35)
Rating: 3

Overall rating of views: 3

Natural Features of Ski Incline

6-3. Exposed rock formations (Photos #11, 28, 32).
Rating: 4

6-4 Conifer forest (Photos #5, 6, 7)
Rating: 3

6-5. Ski slopes and adjacent hills (Photos #1, 2, 4, 6, 12, 18, 34).
Rating: 4

Overall rating of natural features: 4

Man-Made Features of Ski Incline

6-a. Main parking area (Photos #21, 25, 38, 39).
Rating: 2

6-b. Main lodge (Photos #1, 23, 32, 33, 36).
Rating: 3

6-c. Support structures (Photos #3, 4, 6, 22, 24, 29, 37, 38)
Rating: 3

Overall rating of man-made features: 3

Summary:

Overall Rating for Views:	3
Overall Rating for Natural Features:	4
Combined Rating for Views and Natural Features:	3
Overall Rating for Man-Made Features:	3

The high scenic quality of Ski Incline is attributable to the variety of land forms and features and to the openness of the area, which allows those forms and features to be seen. The ski slopes have been much more sensitively integrated into the natural landscape than at other resorts in the basin. The basin design of the man-made facilities is good, although the layout lacks cohesiveness. The absence of landscaping around the facilities gives the area an unadorned, worn appearance.

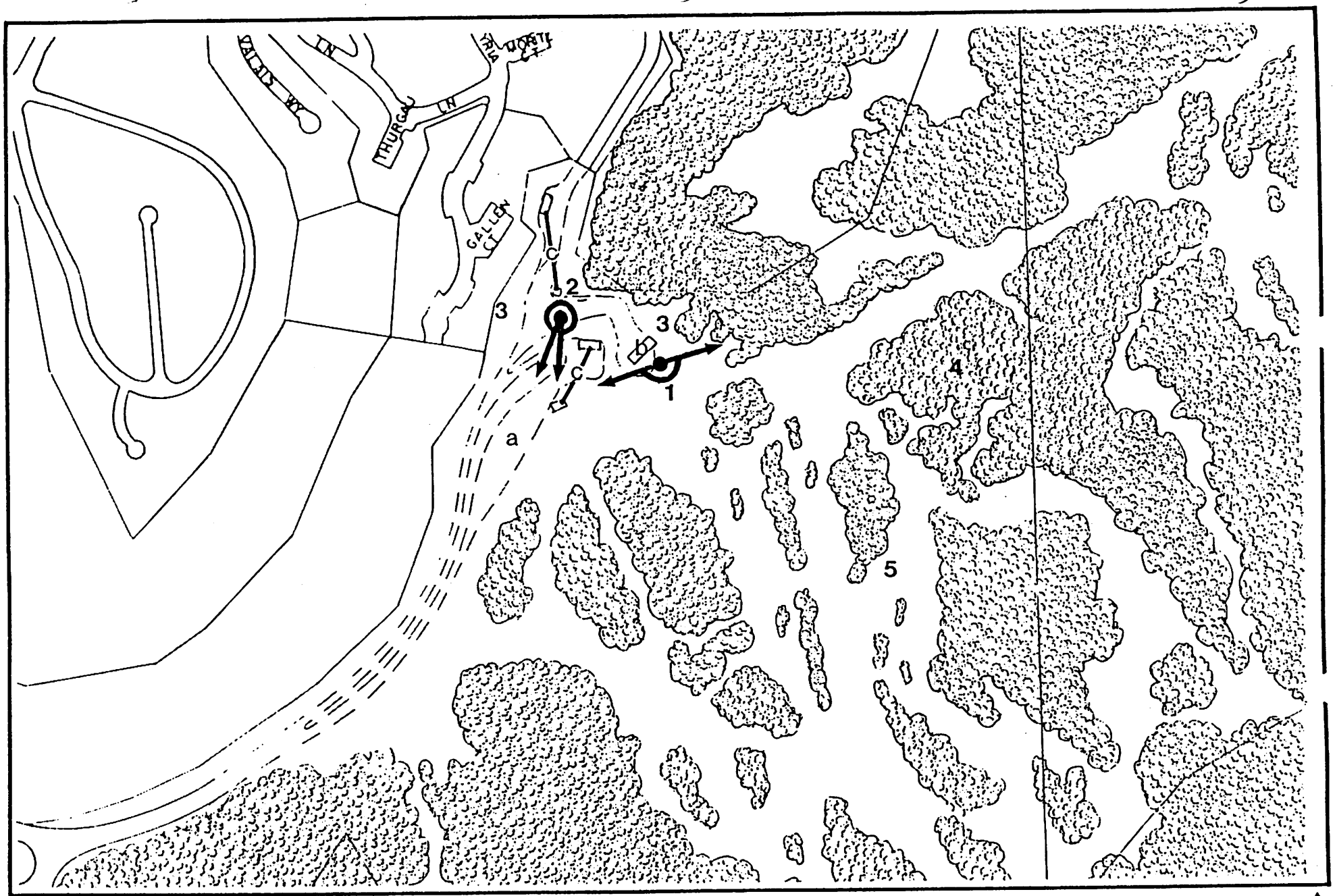


Figure 6a Scenic Resources

SKI INCLINE

SCALE: 1" = 400'

Elements That Contribute to the Scenic Quality of Ski Incline

A. The verticality of the hills and the sense of enclosure they provide.

B. The conifer forest which covers the hillsides.

C. The light-colored rock formations which contrast sharply with the dark green forest cover.

D. The glimpse of the lake and distant shore to the south.

Elements That Detract from the Scenic Quality of Ski Incline

A. The absence of landscaping around the various structures makes the buidings appear poorly integrated with the natural environment. The bare earth and pavement around the buildings contrasts sharply with the lushness of the forest vegetation which encompasses the resort.

B. The embankment between the road and the parking area is predominantly bare earth and has very little visual appeal. It also poses erosion problems. The embankment between the parking area and the lodge has been covered with large rocks to help stabilize it, which may be effective for reducing erosion and slumping but lacks visual appeal.

C. The location of the maintenance area at the north end of the parking lot directly below the front of the lodge is visually distracting. It places a visually unappealing area in a central location where it will be seen by all visitors moving toward the lodge from the parking lot and by those standing on the deck in front of the lodge.

D. The residences on the slopes west of the ski area (Tyrolean Village) have not been well-integrated with the natural environment. They appear to be merely perched on the bedrock slopes and their bright colors attract the eye.

E. The cut-banks along the west side of the road are highly visible alterations in the environment because of the very light-colored bedrock which has been exposed and the very tall, steep character of the cuts.

Recommendations for Preserving the Scenic Quality of Ski Incline

A. Tyrolean Village and the hillside west of Ski Way

1. New development should be visually screened from the recreation area. Structures should be sited so that existing trees are preserved as a visual screen.

2. Structures should not be permitted to exceed the height of the existing tree cover.

3. Structures should not be permitted to extend above the ridgeline. Tree removal which would create gaps in the vegetation along the ridgetop should not be permitted.

4. Use of reflective materials should be restricted and use of materials which blend into the surrounding landscape encouraged. Hues should fall within a range of natural colors that complements rather than contrasts with the existing vegetation and earth tones. Values should be equal to or darker than those of surrounding colors. These guidelines should apply to all visible surfaces of structures including roofs, siding, fences, etc. (Photos #9, 10, 18, 19, 26, 27, 28)

B. Ski slopes and hillsides east of the main lodge

These slopes have been modified for skiing in a manner that is sensitive to the natural forms and vegetation. The resulting ski slopes are much more visually appealing than those of other ski areas in the basin. These slopes with their heavy forest cover create a very scenic recreational setting and should be preserved to ensure a quality recreational experience.

C. Ski Incline

1. Landscaping should be introduced on the embankment along the north and west sides of the main parking area. Low-growing shrubs should also be added to act as a buffer/screen between the road and the parking areas. (Photos #20,21, 22, 24, 39)

3. The location of the maintenance yard makes it very difficult to visually screen it from the other areas of the resort. Relocation of the yard to an area which is less centralized and less scenically sensitive should be considered. (Photos #20, 24, 37)

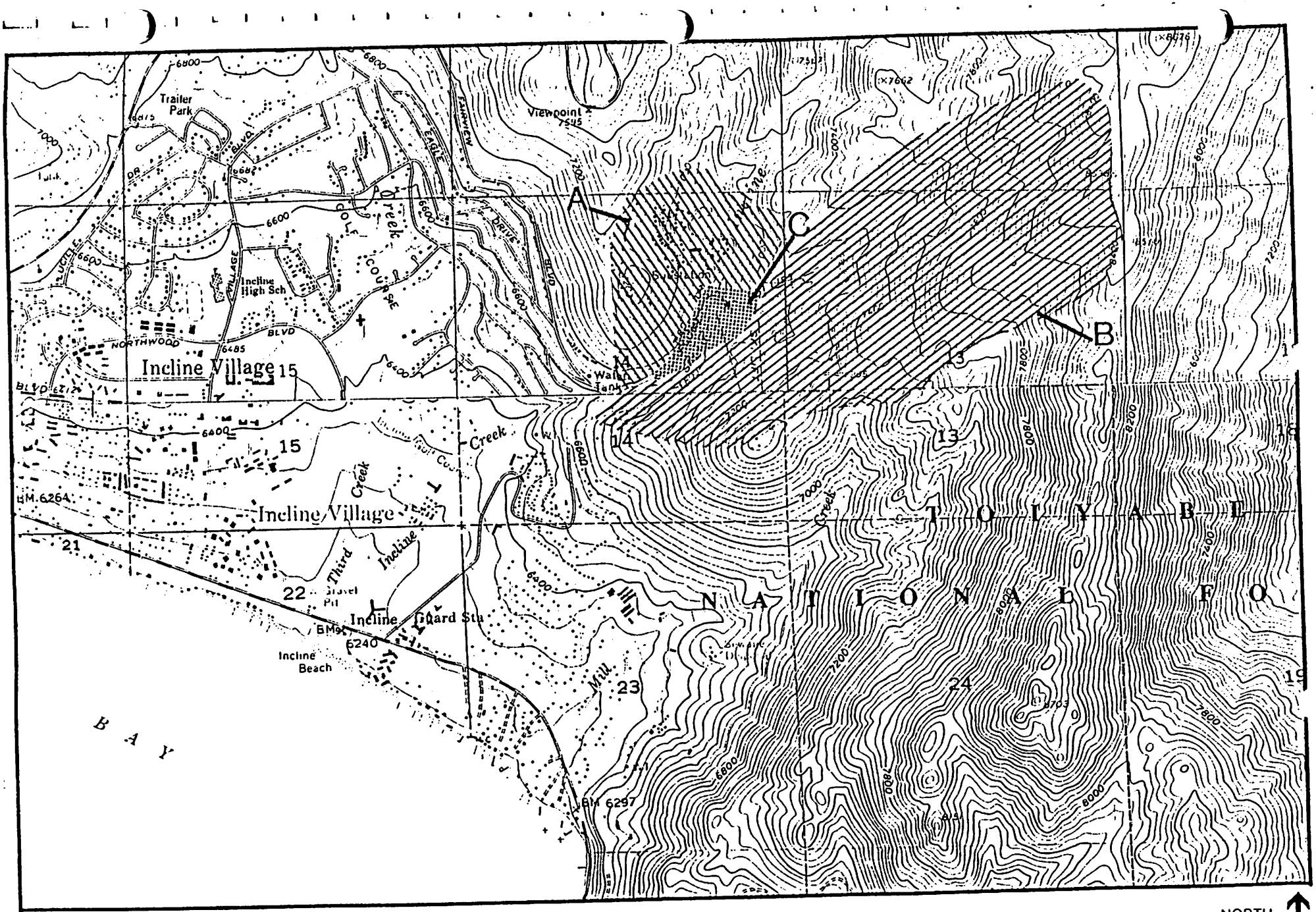
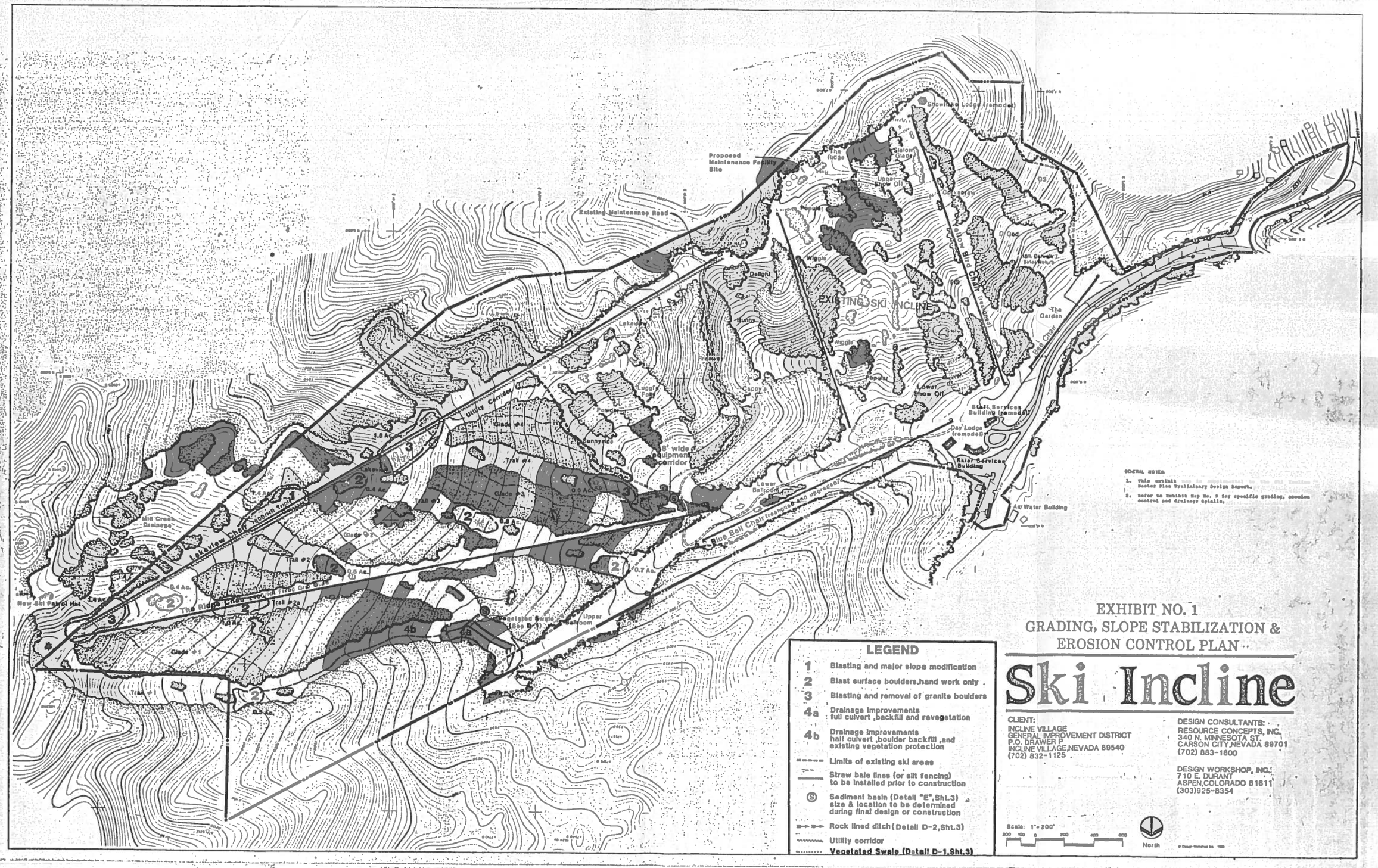


Figure 6b Visually Sensitive Areas

SKI INCLINE

SCALE: 1"=2000'

APPENDIX B



GENERAL NOTES:

1. This exhibit [illegible] Master Plan Preliminary Design Report.
2. Refer to Exhibit Map No. 2 for specific grading, erosion control and drainage details.

LEGEND

1	Blasting and major slope modification
2	Blast surface boulders,hand work only
3	Blasting and removal of granite boulders
4a	Drainage improvements full culvert ,backfill and revegetation
4b	Drainage improvements half culvert ,boulder backfill ,and existing vegetation protection
------	Limits of existing ski areas
	Straw bale lines (or silt fencing) to be installed prior to construction
(S)	Sediment basin (Detail "E",Sht.3) size & location to be determined during final design or construction
	Rock lined ditch (Detail D-2,Sht.3)
	Utility corridor
	Vegetated Swale (Detail D-1,Sht.3)

EXHIBIT NO. 1
GRADING, SLOPE STABILIZATION & EROSION CONTROL PLAN

Ski Incline

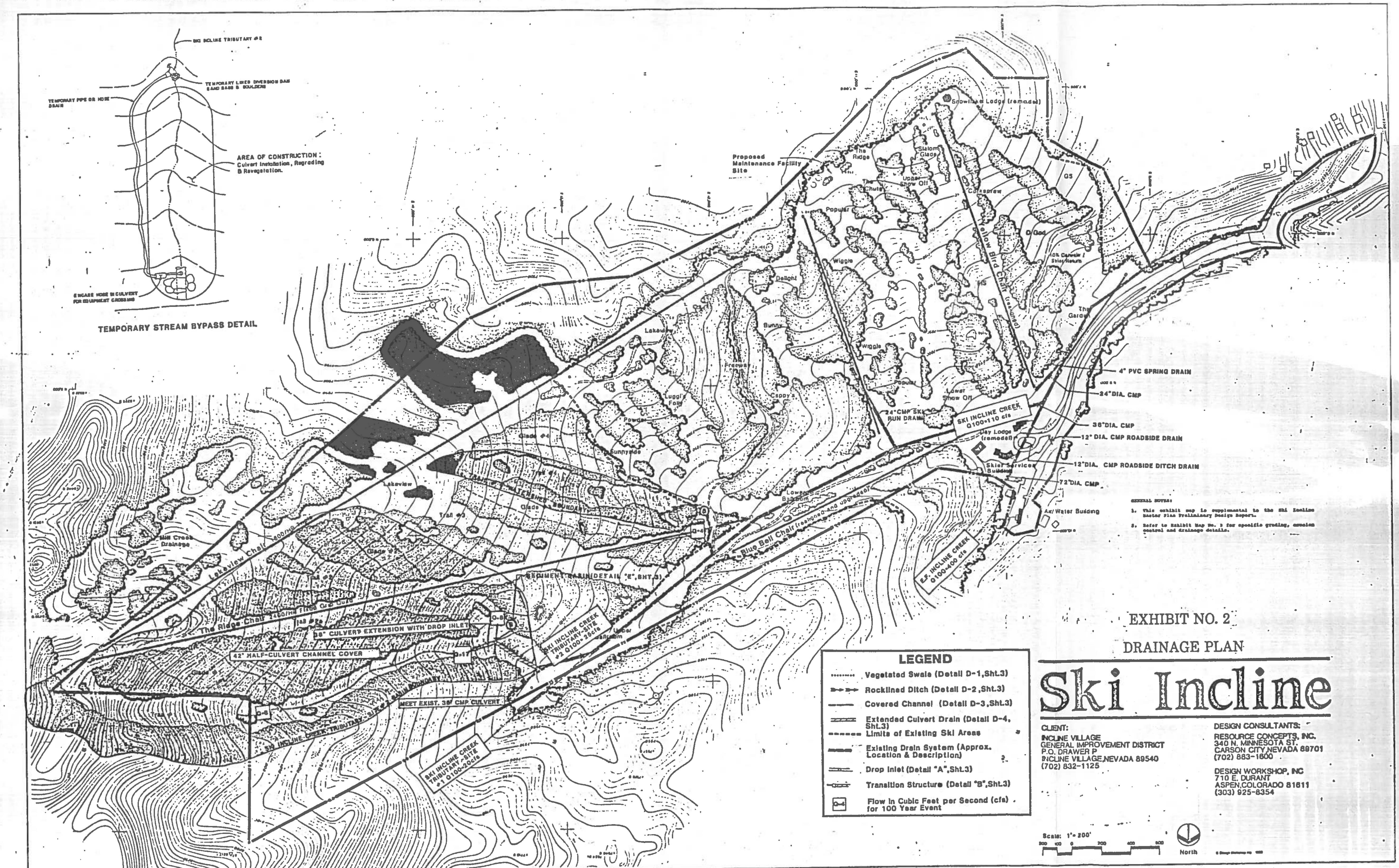
CLIENT:
INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
P.O. DRAWER P
INCLINE VILLAGE,NEVADA 89540
(702) 832-1125

DESIGN CONSULTANTS:
RESOURCE CONCEPTS, INC.
340 N. MINNESOTA ST.
CARSON CITY,NEVADA 89701
(702) 883-1600

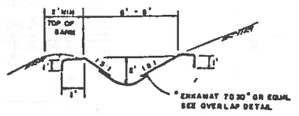
DESIGN WORKSHOP, INC.
710 E. DURANT
ASPEN,COLORADO 81611
(303)925-8354

Scale: 1"=200'

North

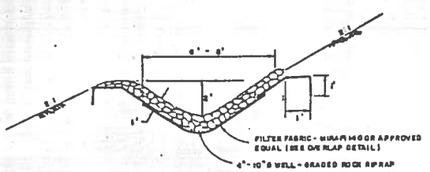


TEMPORARY STREAM BYPASS DETAIL
TEMPORARY LINED DIVERSION DAM SAND BAGS & BOULDERS
TEMPORARY PIPE OR HOSE DRAIN
AREA OF CONSTRUCTION: Culvert Installation, Regrading & Revegetation.
ENCASE HOSE IN CULVERT FOR EQUIPMENT CROSSING
Proposed Maintenance Facility Site
Snowflake Lodge (remodel)
The Ridge
Slalom Glade
Upper Show Off
The Chute
Popular
Corkscrew
GS
D God
10% Catwalk / Skier Return
Yellow Bird Chair (realigned)
Wiggle
Delight
Bunny
Lakeview
Freeway
Luggi's Folly
Powder
Cappy's
Glade #4
Sunnyside
Trail #4
Trail #3
Glade
Lower Show Off
The Garden
24" CMP SKI RUN DRAIN
SKI INCLINE CREEK Q100=110 cfs
Day Lodge (remodel)
Skier Services Building
Air/Water Building
4" PVC SPRING DRAIN
24" DIA. CMP
36" DIA. CMP
12" DIA. CMP ROADSIDE DRAIN
12" DIA. CMP ROADSIDE DITCH DRAIN
72" DIA. CMP
Lower Ballroom
Upper Ballroom
Blue Bell Chair (realigned and upgraded)
E.F. INCLINE CREEK Q100=400 cfs
Mill Creek Drainage
Lakeview Chair 1800/HR
The Ridge Chair 2400/HR
SEDIMENT BASIN (DETAIL "E", SHT.3)
36" CULVERT EXTENSION WITH DROP INLET
42" HALF-CULVERT CHANNEL COVER
MEET EXIST. 36" CMP CULVERT
SKI INCLINE CREEK TRIBUTARY-SITE #2 Q100=25cfs
SKI INCLINE CREEK TRIBUTARY-SITE #1 Q100=20cfs
GENERAL NOTES:
1. This exhibit map is supplemental to the Ski Incline Master Plan Preliminary Design Report.
2. Refer to Exhibit Map No. 3 for specific grading, erosion control and drainage details.
LEGEND
Vegetated Swale (Detail D-1,Sht.3)
Rocklined Ditch (Detail D-2,Sht.3)
Covered Channel (Detail D-3,Sht.3)
Extended Culvert Drain (Detail D-4, Sht.3)
Limits of Existing Ski Areas
Existing Drain System (Approx. Location & Description)
Drop Inlet (Detail "A",Sht.3)
Transition Structure (Detail "B",Sht.3)
Flow in Cubic Feet per Second (cfs) for 100 Year Event
EXHIBIT NO. 2
DRAINAGE PLAN
Ski Incline
CLIENT:
INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
P.O. DRAWER P
INCLINE VILLAGE,NEVADA 89540
(702) 832-1125
DESIGN CONSULTANTS:
RESOURCE CONCEPTS, INC.
340 N. MINNESOTA ST.
CARSON CITY,NEVADA 89701
(702) 883-1600
DESIGN WORKSHOP, INC
710 E. DURANT
ASPEN,COLORADO 81611
(303) 925-8354
Scale: 1"= 200'
North



DETAIL D-1

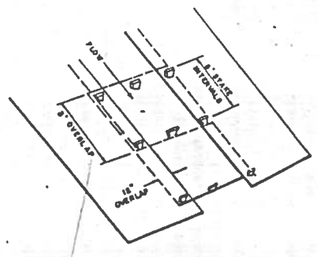
VEGETATED CROSS-SLOPE DRAINSWALE



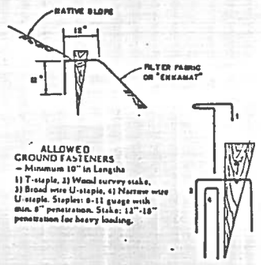
DETAIL D-2

ROCKLINED DRAINAGE DITCH

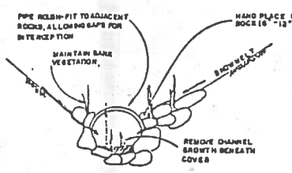
OVERLAP DETAIL



(TYPE OF GROUND FASTENERS WILL DEPEND ON SITE CONDITION)



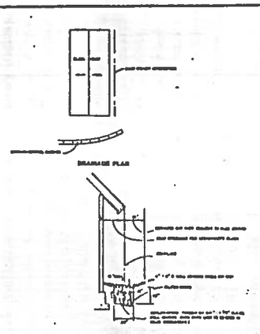
ALLOWED
GROUND FASTENERS
- Minimum 10" in Lengths
1) T-staple, 2) Wood survey stake,
3) Broad wire U-staple, 4) Narrow wire U-staple. Staples: 8-11 gauge with min. 8" penetration. Stake: 12"-18" penetration for heavy loading.



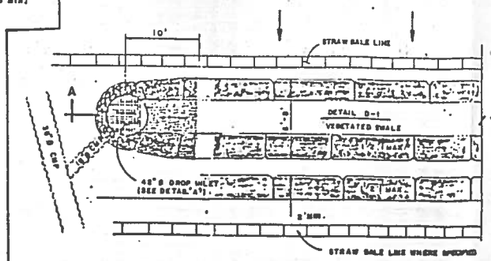
(AT SITES OF CONCENTRATED INFLOW & AT REGULAR SPACING DETERMINED PRIOR TO FINAL DESIGN, INLET STRUCTURES TO BE CONSTRUCTED.)

DETAIL D-3

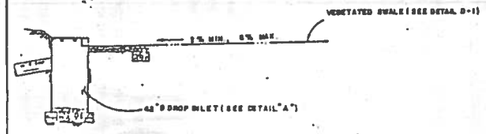
RUNOFF CONVEYANCE MODIFICATION
HALF 42" CMP CHANNEL COVER



TYPICAL BUILDING EROSION CONTROL PLAN

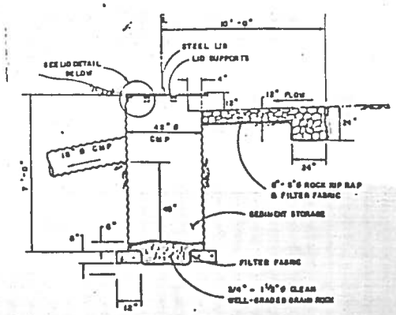


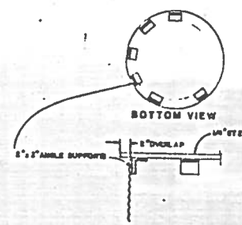
PLAN



SECTION A-A

PERMANENT SLOPE DRAINAGE INTERCEPTOR DITCH

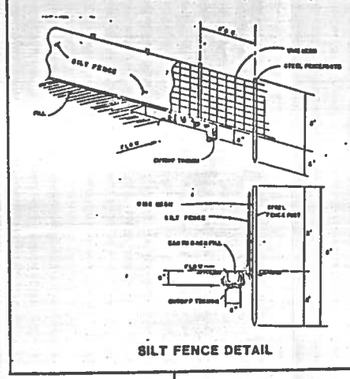




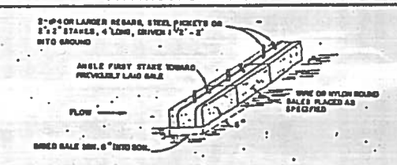
LID DETAIL

DETAIL "A"

TYPICAL DROP INLET



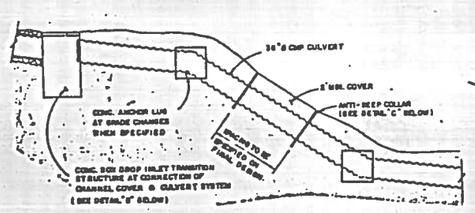
SILT FENCE DETAIL



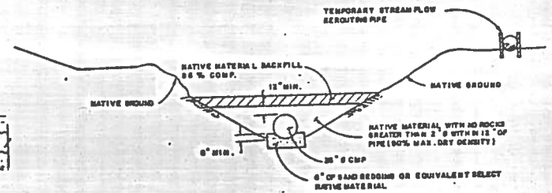
Straw Bale Line Detail

GENERAL NOTES:

1. This exhibit map is supplemental to the Ski Incline Master Plan Preliminary Design Report.



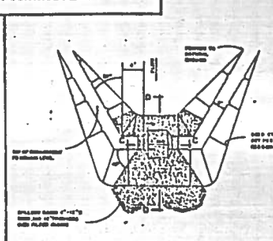
ELEVATION

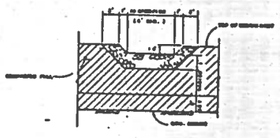


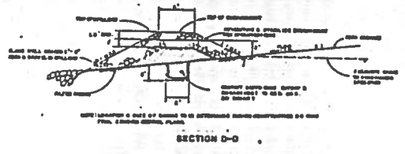
SECTION

DETAIL D-4

RUNOFF CONVEYANCE MODIFICATION
36" CMP DRAIN PIPE

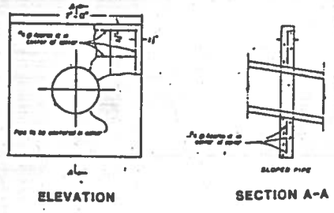






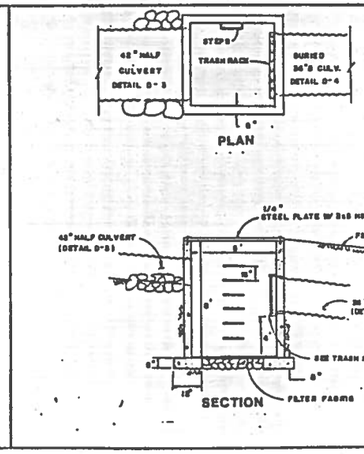
DETAIL "E"

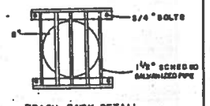
SEDIMENT BASIN



DETAIL "C"

ANTI-SEEP COLLAR





TRASH RACK DETAIL

DETAIL "B"

CONCRETE BOX DROP INLET
TRANSITION STRUCTURE

EXHIBIT NO.3

DRAINAGE & EROSION CONTROL DETAILS

Ski Incline

CLIENT:
INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
P.O. DRAWER P
INCLINE VILLAGE, NEVADA 89450
(702) 832-1125

DESIGN CONSULTANTS:
RESOURCE CONCEPTS, INC.
340 N. MINNESOTA ST.
CARSON CITY, NEVADA 89701
(702) 883-1600

DESIGN WORKSHOP, INC.
710 E. DURANT
ASPEN, COLORADO 81611
(303) 925-8354

APPENDIX C

C

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

September 11, 1986

Regulatory Section (N26-088)

Mr. Dennis Oost
Design Workshop, Incorporated
710 East Durant
Aspen, Colorado 81611

Dear Mr. Oost:

I am responding to your letter dated August 25, 1986 for a Department of the Army permit to construct ski trail over an unnamed tributary to Incline Creek in Section 13, Township 16 North, Range 18 East, Washoe County, Nevada.

The Chief of Engineers has issued a nationwide permit that allows for the placement of dredged or fill material above the headwaters in waters of the United States. Your trail can be constructed under this authority provided the work meets the conditions listed on the attached information sheet.

If you have any questions, please contact our Regulatory Section, Room 6528, or telephone (916) 551-2265.

Sincerely,

Bob Junell

Robert W. Junell
Chief, Unit 2
Regulatory Section

Attachment

Copies Furnished:

Lahontan Regional Water Qualtiy Control Board, Post Office Box 9428, South Lake Tahoe, California 95731-2428

(NW 26)

Information Sheet
Nationwide General Permit
Work Above Headwaters and in Isolated Waters and Wetlands

The Corps of Engineers has issued a nationwide general permit for placing dredged or fill material in the following waters:

a. Non-tidal rivers, streams, and their impoundments, including adjacent wetlands that are located above the headwaters. The headwater is defined as a point on a non-tidal stream where the average annual flow is less than 5 cubic feet per second.

b. Into isolated, non-tidal waters of the United States, including wetlands, that are not part of a surface tributary system to interstate waters or navigable waters of the United States.

This nationwide general permit eliminates the need for further processing for discharges which affect less than 1 acre of the above waters of the United States, including wetlands.

EXCEPTION - Those discharges which cause the loss or substantial adverse modification of 10 acres or more of the above waters of the United States, including wetlands are not permitted under this nationwide permit.

NOTIFICATION REQUIREMENTS - For discharges which cause the loss or substantial adverse modificatiion of 1 to 10 acres of the above water of the United States, including wetlands, the District Engineer must be notified before beginning work. Notification must include the following information:

a. Name, address, and phone number of nationwide permittee.

b. Location of planned work (complete written description or indicated on a good quality map, e.g., USGS topographic quadrangle).

c. Brief description of the proposed work, its purpose, and approximate area of waters (including wetlands) that would be adversely affected as a result of the proposed work.

d. Copies of other federal, state, or local permits and certifications obtained for the proposed work.

e. Any other information that the permittee believes is appropriate.

THE NATIONWIDE PERMITTEE SHALL NOT BEGIN WORK:

a. Until notified by the District Engineer that the work may proceed under the nationwide permit; or

b. Until an individual permit is obtained (if the Division Engineer determines that the nationwide permit will not apply); or

c. Until 20 days have passed from receipt of the permittee's notification by the District Engineer and no notice has been received from the District Engineer.

FOR YOUR DISCHARGE TO QUALIFY FOR THIS NATIONWIDE PERMIT, YOU MUST COMPLY WITH THE FOLLOWING:

a. The discharge will not be located in the proximity of a public water supply intake.

b. The discharge will not occur in areas of concentrated shellfish production unless the discharge is directly related to a shellfish harvesting activity.

c. The discharge will not jeopardize a threatened or endangered species as identified under the Endangered Species Act, or destroy or adversely modify the critical habitat of such species. In the case of federal agencies, it is the agencies' responsibility to review its activities to determine if the action "may affect" any listed species or critical habitat. If so, the federal agency must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service.

d. The discharge will consist of suitable material free from toxic pollutants (see Section 307 of the Clean Water Act) in toxic amounts.

e. The fill created by the discharge will be properly maintained to prevent erosion and other non-point sources of pollution.

f. The activity will not significantly disrupt the movement of those species of aquatic life indigenous to the waterbody (unless the primary purpose of the fill is to impound water).

g. The discharge will not occur in a component of the National Wild and Scenic River System.

h. The activity will not cause an unacceptable interference with navigation.

THE FOLLOWING MANAGEMENT PRACTICES SHOULD ALSO BE FOLLOWED, TO THE MAXIMUM EXTENT PRACTICABLE, TO MINIMIZE THE ADVERSE EFFECTS OF THE DISCHARGE ON THE AQUATIC ENVIRONMENT. Failure to comply with these practices may be cause for the District Engineer to recommend or the Division Engineer to take discretionary authority to regulate the activity on an individual or regional basis.

a. Discharges of dredged or fill material into waters of the United States shall be avoided or minimized through the use of other practical alternatives.

b. Discharges in spawning areas during spawning season shall be avoided.

c. Discharges shall not restrict or impede the movement of aquatic species indigenous to the waters or the passage of normal or expected high flows or cause relocation of the waters (unless the primary purpose of the fill is to impound waters).

d. If the discharge creates an impoundment of water, adverse impacts on aquatic system caused by the accelerated passage of water and/or the restriction of its flow, shall be minimized.

e. Discharges in wetland areas shall be avoided.

f. Heavy equipment working in wetlands shall be placed on mats.

g. Discharges into breeding areas for migratory waterfowl shall be avoided.

h. All temporary fills shall be removed in their entirety.

This nationwide general permit applies only to the authorization required under Section 404 of the Clean Water Act. THIS PERMIT DOES NOT OBVIATE THE REQUIREMENT TO OBTAIN ANY STATE, LOCAL, OR OTHER FEDERAL APPROVAL REQUIRED BY LAW.

If you have any questions or need additional information concerning the nationwide general permit, please contact our Regulatory Section, Room 6528, or telephone (916) 551-2265.

APPENDIX D

TAHOE REGIONAL PLANNING AGENCY

P.O. Box 1038
Zephyr Cove, Nevada 89448-1038

195 U.S. Highway 50
Round Hill, Zephyr Cove, NV

(702) 588-4547

January 7, 1987

Jurgen Wetzstein, Manager
Ski Incline
P.O. Drawer AL
Incline Village, NV 89450

Dear Mr. Jurgen Wetzstein:

The purpose of this letter is to pass along the comments we have received to date on the DEIS for the Ski Incline Master Plan, and to expand upon TRPA staff comments made at the December, 1986, Governing Board meeting.

As you know, the comment period on the DEIS ended on January 5. We have received written comments from the United States Forest Service, Pacific Southwest Region; the Resources Agency of California; the California Regional Water Quality Control Board--Lahontan Region; and the USDA Soil Conservation Service. Only the latter two comments are substantive.

I spoke to Jon Hoefer today, and he said the USFS, Lake Tahoe Basin Management Unit, has not prepared any written comments, and that he would rely on comments made previously at the APC meetings. I understood that the League To Save Lake Tahoe had planned to comment, and have left a message with their attorney's office to notify me as to whether comments have been mailed. I will forward any comments we receive to you.

The following are additional TRPA staff comments for you and your contractors to consider. Until we can develop complete responses to all comments, I do not feel that I can recommend certification of the EIS to the APC and the Governing Board.

Water Quality-Related Comments

1. The final EIS must provide information on any and all proposed trenching for snow-making, utilities, or other purposes. The EIS must also estimate the temporary and permanent environmental impacts of such trenching, specifically in the areas of possible erosion and difficulty of revegetation.

2. The final EIS should include (perhaps as an attachment) a complete, detailed plan of construction, including a plan for logging the new ski runs. The draft Code of Ordinances (October 31, 1986) sets forth the proposed TRPA standards for logging on sensitive lands. Although the Code is still under review, Ski Incline should use the October 31 draft for guidance on acceptable logging practices until and unless it is modified. We have received a letter from the Nevada Division of Forestry stating that the proposed TRPA standards are too restrictive to accomplish the stated goal of increased forest diversity. However, the October 31 draft of the Code remains as TRPA's most-current statement on logging standards.

3. The final EIS should indicate clearly the plans regarding road access to the top of the ridge, and discuss all associated impacts and mitigation. Permanent roads must be incorporated into the coverage calculations for the proposed master plan.

4. The final EIS should include a proposed plan of water quality protection, enhancement, and monitoring for the Ski Area. In my opinion, the mitigation program for the master plan must include not only a long-term water quality monitoring program, but also a process for identifying and correcting water quality problems that may arise in the future. I will recommend that the conditions of approval for the construction of the expanded ski area include water quality objectives which must be met during both the construction and operational phases.

Transportation-Related Comments

1. The final EIS should address, in addition to the existing disclosure in the DEIS, a discussion of the cumulative impacts of ski area development in the general vicinity of Mount Rose on traffic and transportation in the Incline Village area. My staff has been working with the proponents of the Galena ski resort on quantification of transportation impacts, and we would be happy to share any information we have with you and your contractors.

Conservation-Related Impacts

1. Because the APC expressed strong concerns about the encroachment of the new ski runs on over two acres of existing stream environment zone (SEZ), the final EIS should expand upon the discussion of SEZ impacts, possible alternative designs which could reduce or eliminate the impacts, justifications for making the required findings which would allow public outdoor recreation encroachment in an SEZ under the TRPA Goals and Policies, and plans for mitigating impacts upon SEZs. In particular, any specific information on offsetting SEZ restoration projects should be included, if it is available.

2. As you firm up your plan of construction, logging plans, and access road plans, please review the disclosure of impacts upon the historic logging flume and other historic features of the Ski Incline site, and ensure that all impacts are clearly disclosed and adequately mitigated.

3. As we discussed at our December breakfast meeting at the Peppermill, I have a concern that the disclosure of scenic impacts presented in the DEIS, and presented to the APC by videotape, is dated. The final EIS should include an updated visual analysis based upon the final design decisions for the ski area expansion. This analysis should address not only general scenic quality concerns, but also impacts of the proposed expansion upon the TRPA scenic thresholds, which set visual quality standards for all roadway and shoreline segments in the Tahoe Region. I appreciate greatly your willingness to arrange for a new presentation on scenic impacts for the APC, and would also like to remind you that the TRPA Governing Board indicated, at their December meeting, an interest in seeing the scenic resources presentation.

Other Concerns

1. The final EIS should include a disclosure of all anticipated impacts in the area of water use and water rights. Specifically, what will be the new demand for water, with and without snow-making, and what will be the impact of that new demand on physical supplies and water rights?

2. The final EIS should include a disclosure of anticipated project phasing. The discussion of project phasing should be coordinated with the plan of construction, mentioned above.

3. The environmental impacts of the "Twin Lakes" lodge will depend largely on the intended recreational experience the lodge will provide. Will it have bathrooms? Running water? Sewer lines? Will it have hot food service? How big will it be? Will it have decks? How will it be staffed? The final EIS should be more precise about the intended use of the "Twin Lakes" lodge, including the phasing of those uses.

4. Finally, the APC has expressed a concern that the Ski Incline expansion be consistent with the Criteria for Development and Expansion of Ski Areas, Lake Tahoe Basin, developed by the California Tahoe Regional Planning Agency through an interagency effort in 1977. Although this document has no official status with the TRPA, it would be useful for obtaining a positive recommendation from the APC on EIS certification to review this document and discuss in what ways the Ski Incline proposal is consistent, and not consistent, with it. (A copy of the document is enclosed.)

Jurgen, I have enjoyed working with you on development of the master plan EIS, and I'm sorry that our litigation settlement process has dragged out so long, so that it has impacted on IVGID's schedule for the expansion of Ski Incline. These comments are intended to be constructive, and I hope you and your contractors will accept them in that light. It does appear that our litigation settlement work load is winding down, and I should be able to devote more time to the Ski Incline EIS in the near future. Please contact me if you have any questions or comments on this letter.

Yours truly,

Dave

David S. Ziegler, Chief
Long Range Planning Division

DSZ:mmi

enclosure

cc: Mike Harper, Washoe County
Jon Hoefer, USFS-LTBMU
Jean Shaffer, TRPA

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
PACIFIC SOUTHWEST REGION
REGIONAL OFFICE
630 SANSOME STREET
SAN FRANCISCO, CA 94111

REPLY TO: 1920

DATE: DEC 1 8 1986

David S. Ziegler, Chief
Long Range Planning Division
Tahoe Regional Planning Agency
P.O. Box 1038
Zeoher Cove, NV 89448

Dear Mr. Ziegler:

This is in response to your November 7, 1986 letter requesting our comments on the DEIS: Ski Incline, Incline Village, NV. Our Regional comments will be provided to you by the Supervisor, Lake Tahoe Basin Management Unit, South Lake Tahoe.

Sincerely,

JON D. KENNEDY
Regional Planning and Budget Officer

Resources Building
1416 Ninth Street
95814

(916) 445-5656

Department of Conservation
Department of Fish and Game
Department of Forestry
Department of Boating and Waterways
Department of Parks and Recreation
Department of Water Resources
California Conservation Corps

GEORGE DEUKMEJIAN
GOVERNOR OF
CALIFORNIA

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

Air Resources Board
California Coastal Commission
California Waste Management Board
Colorado River Board
Energy Resources Conservation and Development Commission
San Francisco Bay Conservation and Development Commission
State Coastal Conservancy
State Lands Commission
State Reclamation Board
State Water Resources Control Board
Regional Water Quality Control Boards

January 2, 1987

Mr. David S. Ziegler
Tahoe Regional Planning Agency
Post Office Box 1038
Zephyr Cove, NV 89448

Dear Mr. Ziegler:

The State has reviewed Draft EIS, Ski Incline Master Plan, submitted through the State Clearinghouse, Office of Planning and Research.

Review was coordinated with the State Lands Commission, the Lahontan Regional Water Quality Control Board, and the Departments of Conservation, Fish and Game, Parks and Recreation, Water Resources, Forestry, Transportation, and Health Services.

None of the above-listed reviewers has provided a comment regarding this document. Consequently, the State will have no comments to offer.

Thank you for providing an opportunity to review this document.

Sincerely,

Charles K. Goldsmith
for Gordon F. Snow, Ph.D
Assistant Secretary for Resources

cc: State Clearinghouse
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
(SCH# 86111010)

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION

2092 LAKE TAHOE BOULEVARD
P.O. BOX 9428
SOUTH LAKE TAHOE, CALIFORNIA 95731-2428
(916) 544-3481

Hand Delivered
4:20

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JAN - 5 1987
TAHOE REGIONAL
PLANNING AGENCY

January 5, 1987

Mr. David Ziegler
Tahoe Regional Planning Agency
P. O. Box 1038
Zephyr Cove, NV 89448

REVIEW OF DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), SKI INCLINE, INCLINE VILLAGE, NEVADA, SCH #86111010

Dear Mr. Ziegler:

Although the Lahontan Regional Board has no direct jurisdiction over this project, we are submitting comments on the EIS as a "trustee agency" for the waters of Lake Tahoe, (State California Environmental Quality Act Guidelines, Section 15386). The project would involve construction of new ski runs, lift lines, and related facilities on a site which includes both high erosion hazard lands and stream environment zones (SEZ's), with associated risks of additional sediment and nutrient loading to Lake Tahoe.

The Regional Board's representative on the bistate Tahoe Regional Planning Agency's (TRPA's) Advisory Planning Commission (APC) will also be asked to vote on recommendations for the certification of a final EIS and approval of the project by the TRPA Governing Body. At the December APC meeting, it was announced that the ski area master plan on which the EIS is based will be issued as a separate document. We have not yet reviewed this plan. It was also announced that the access road proposed in the preferred alternative of the EIS is being dropped from the project; deletion of the road satisfies many but not all of our concerns about erosion impacts. Our comments on the EIS are as follows:

1. The entire report needs better editing; there are many typographical errors or misspelled words (e.g., "original plan" for "regional plan"), and the use of jargon ("Type I and Type II improvements", page 64), without definition in the text makes it hard to follow if one has not read the separate master plan. In particular, the table on Nevada water quality standards should be checked closely. The Algal Growth Potential standard is misquoted and specific conductance is expressed as "micro ohms" rather than "micromhos".

2. Grading of new ski runs is not being proposed initially; it could be done later in connection with installation of snowmaking equipment if long-term snow conditions indicate such equipment is desirable. Because of the potentially significant water quality impacts of erosion from graded slopes, and the difficulty of revegetating them, feasible alternatives should be sought. Is there any snowmaking equipment available which does not require extensive grading for installation?

3. It is proposed that drainage courses (erroneously referred to as "stream environment zones") be enclosed in culverts on new ski runs. The argument that this feature of the project must "by its very nature" be located in stream environment zones because ski runs generally follow fall lines does not seem to meet the intent of the exemption criteria in the "208" water quality plan. These criteria were intended to promote water-oriented public recreation projects. Feasible alternatives to the proposed SEZ work should be considered, such as seasonal culverts or bridges which would minimize disturbance of soils and vegetation.

4. Potential water quality impacts of chemicals which could be used on the project site should be considered. These could include fuels, solvents, snow grooming chemicals, deicing chemicals for parking lots and walkways, fertilizers and pesticides for use in landscaping, and domestic wastewater from the proposed high elevation lodge. Will the stumps to be left in places on the cleared ski runs be treated with fungicides? Mitigation should include contingency plans for prevention and cleanup of leaks and spills of wastewater and hazardous chemicals.

5. Cumulative impacts of the project should be discussed together with those of other existing and planned ski areas in the Lake Tahoe region. The TRPA is limiting the total allowable capacity for ski area expansion in the Tahoe Basin (in terms of "people at one time"). The tradeoffs involved in allocation of capacity to Ski Incline rather than other ski areas should be considered. While the Ski Incline project has potential to reduce traffic, could other ski areas expand with less need for grading and disturbance of SEZ's?

6. The EIS concludes (page 39) that there will be no irreversible impacts on soils. However, the creation of new impervious surface and the clearing of ski runs on soils which are very difficult to revegetate should be viewed as at least very long term impacts.

7. The discussion on page 170 of compatibility with plans for the Tahoe area should include compliance with the bistate "208" water quality plan.

Please contact Dr. Judith E. Unsicker at this office if you wish to discuss these comments.

Yours truly,

O. R. BUTTERFIELD
EXECUTIVE OFFICER

cc: SWRCB/Division of Water Quality/Kenneth Smarkel
State Clearinghouse/Peggy Osborn
Nevada Division of Environmental Protection

nla

19863551

SKI INCLINE COMMENTS

USDA SOIL CONSERVATION SERVICE
P.O. BOX 10529
SOUTH LAKE TAHOE, CA 95731
(916)541-1496

December 15, 1986

David S. Ziegler, Chief
Long Range Planning Division
Tahoe Regional Planning Agency
P.O. Box 1038
Zephyr Cove NV 89448-1038

RE: Ski Incline EIS

Dear Dave:

With reference to the subject EIS, I feel there have been some changes that need to be better defined, which are:

1. I understand the maintenance road will not be constructed, and if this is the case it needs to be addressed in the EIS.

2. Parking: With 900 new PAOT's, it should be better addressed where they are coming from and where parking facilities will be. From the discussion at APC, the parking lot is full 1 or more days a year now; also, will there be a cut off of ticket sales when the parking lot is full?

3. Where will the water come from for snow making? Do they have water rights?

4. Do I understand correctly that no Forest Service land will now be included in the proposed plan?

5. The issue over stream zones needs to be defined. Can public agencies develop something like a ski run in a SEZ, or can it be developed outside a SEZ? Can private individuals do the same? If not, why?

6. If development of this type is allowed, how will the SEZ goal be met?

7. Where close or final grading is to be done for snow making, how will that be handled as, at this point in time there are no BMP's. It seems to me that more detail should be added because of this document going through before the BMP being developed; need to address such

items as stockpiling of soil, mulching, etc.

8. I'm not sure how the culvert in the SEZ will be changed. There was some discussion on removing the culvert during the summer months; I feel this should be addressed and the effects, plus or minus, discussed.

9. Again, I don't believe the issue of fisheries has been addressed formally in any way. Will the culvert under Fairview Ave. and Incline Way be replaced to allow for fish movement?

I'm sorry I didn't get these questions in earlier, but I understand there is still time.

Dave, if you have any questions, please feel free to give me a call.

Sincerely,

Richard C. Pyle CPESC
District Conservationist

United States Department of Agriculture
Forest Service
Lake Tahoe Basin Management Unit
P.O. Box 8465
South Lake Tahoe, CA 95731

Reply to: 1950

Date: January 5, 1987

David S. Ziegler, Chief
Long Range Planning Division
Tahoe Regional Planning Agency
PO Box 1038
Zephyr Cove, NV 89448

Dear Mr. Ziegler:

Just a quick couple of comments on the visual aspects of the Ski Incline Expansion EIS.

1. Page 121: The recommendation for "Preserving the Scenic Quality of Ski Incline (Ski Slopes)" provides no guide for action:

> "These slopes have been modified for skiing in a way that is sensitive to the natural forms and vegetation. The resulting ski slopes are much more visually appealing than those of other ski areas in the basin [How? Most of Heavenly Valley and Homewood can't be seen at all. But it's apparent that all of the expanded Ski Incline will be seen]. These slopes with their heavy forest cover create a very scenic recreational setting and should be preserved [in what state? Developed or undeveloped?] to insure a quality recreational experience."

This paragraph is verbal mush.

2. Page 122: The Summary of Overall Ratings provide no clue as to how the factors were weighted to come up with these 4's and 3's. Combining the scores of the man-modified ski slopes and the surrounding natural terrain confuses things even further. Because we are dealing with an EIS, we have to compare the unmodified natural scene with the modifications proposed in the EIS. This is done later, but erroneously (see below.)

The computer simulation models the tree mass as a uniform three-dimensional solid 75 feet in height. But the photos in appendix H show clearly that very few trees are of this height. The text under "Flora" (p.66) emphasizes the changes in the density and height of the timber stands from the bottom to the top. But this is not reflected in the visual analysis. One result could be that the "concealing effect of the tree masses" (p.130) may be exaggerated in the simulations. On the other hand, the presence of sparser stands near the ridgetop may serve to reduce the contrast of the ski runs. But there is no way to tell that from this analysis.

3. Page 130: The second paragraph may imply that the Forest Service has made specific recommendations for this site, which is not the case.

The assessment that the high ridge of the Carson Range will be visually enhanced by the ski runs is wrong, and rests upon a misunderstanding of visual assessment. There are cases in which visual variety can be introduced to an otherwise monotonous view of unbroken forest cover. Augmenting variety enhances the view. But this is not one of those cases: when seen from Stateline point or Mount Rose Highway there is ample variety already. It is created by the lake itself, by the light-to-heavy density of the timber stands, and by the many rock outcrops. It is simply untrue that the wild, pristine slopes of the Carson Range need to be "enhanced" by ski runs.

4. Page 131: The listed practices are variations on the theme of the 'feathered edge'. But sometimes, soft edges can't be used if there is a requirement to maximize wind deposition of snow or prevent wind scour. A 'hard edge' allows more snow deposition on the trails. When this need is evident, it takes precedence over esthetics.

One important element--perhaps the most important--is missing entirely. The matter of soil color contrast. The treatment of the ground surface of the runs will have far more impact on the quality of the results than the edge treatments will have.

5. Page 162: Recreation impacts are only assessed from the viewpoint of "activities in the village". But the project would also also break the longest roadless portion of the Tahoe Rim Trail with the summit road, lifts and Twin Lakes Lodge; a negative effect on summer backcountry recreation. Cross-country skiers seeking solitude along the ridge will doubtless also be affected.

FRANK A. HAGARY
Forest Landscape Architect

STATE OF NEVADA

19870025
2.9

CHARD H. BRYAN
Governor

JEAN FORD
Director

OFFICE OF THE GOVERNOR

OFFICE OF COMMUNITY SERVICES

Capitol Complex
Carson City, Nevada 89710
(702) 885-4420

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JAN 8 1987
TAHOE REGIONAL
PLANNING AGENCY

January 7, 1987

Mr. David S. Ziegler, Chief
Long Range Planning Division
Tahoe Regional Planning Agency
P.O. Box 1038
Zephyr Cove, Nevada 89448

Re: SAI NV #87300047 Project: Draft EIS, Ski Incline Master Plan

Dear Mr. Ziegler:

Attached are comments from the Department of Wildlife and the Divisionn of Environmental Protection, Forestry, and Historic Preservation and Archeology concerning the above referenced project.

These comments constitute the State Clearinghouse review of this proposal as per Executive Order 12372. Please address these comments or concerns in your final decision.

Sincerely,

John B. Walker

John B. Walker, Coordinator
State Clearinghouse OCS/SPOC

JBW/kw

Enclosures

STATE OF NEVADA

DEPARTMENT OF WILDLIFE

1100 Valley Road

P.O. Box 10678

Reno, Nevada 89520-0022

(702) 789-0500

RICHARD H. BRYAN
Governor

WILLIAM A. MOLINI
Director

December 9, 1986

Mr. John B. Walker
Coordinator
Office of Community Services
1100 East William, Suite 117
Carson City, Nevada 89710

Dear John:

The Nevada Department of Wildlife has received and reviewed the Draft Environmental Impact Statement for the Ski Incline Master Plan (SAI NV # 87300047). Our primary concern is for the protection of Incline Creek watershed which is essential in maintaining the water quality of Incline Creek and Lake Tahoe. Actions proposed in Alternatives Two and Three should consider the necessary management practices to ensure current conditions and explore all opportunities for enhancement of this watershed.

In our review of the document we were unable to determine the extent of snow making by the project. Currently the water demand for snow making is 21 million gallons annually, and the proposed action requires an additional 23 million gallons per year. In order for the project to be in compliance with the Tahoe Regional Planning Agency's Policy stated on C-13, the water must be obtained from Lake Tahoe. The document does not state the source of the additional water for snow making.

SPECIFIC COMMENTS

Page 85 — Fisheries

Under Setting, 1st paragraph - Remove the following sentence: "The game fish are so called because they are more elusive than nongame fish and, when hooked, put up more fight to escape."

Remove "Eastern" from brook trout where it occurs.

Omit "Golden trout - *Salmo aguabonita*. They do not occur in the Tahoe basin.

Scientific name for Kokanee salmon is: *Onchorhynchus nerka* (freshwater form).

Page 86
Under Brown Trout - omit the last two sentences: "In recent years a new strain of brown trout, called the Massachusetts, have been developed. It is somewhat less gamey than the regular brown trout and probably will be stocked generously in the future." (California and Nevada no longer have Massachusetts brown, and brown trout haven't been stocked recently.)
Omit section on Golden Trout

Page 88
Under Permit Area Setting - It's unlikely that brook trout would occur in Mill Creek from the mouth to 1/2 mile above, since the creek frequently dries up along this section in the summer.
Under Nongame Fish - Usually bullheads are referred to as game fish and the species for brown bullhead is *Ictalurus nebulosus* and not *Leictalurus*. Scientific spelling for golden shiner is *Notemigonus crysoleucas*. Lahontan mountain sucker is now called Mountain sucker, *Catostomus platyrhynchus*, and no longer called *Pantosteus lahontan*.

Page 89
Under Existing Fishery - Brown trout, dace and suckers are known to occur.

Page 90
1st paragraph, last line - Nevada Department of Wildlife has worked with High Sierra Gardens, Hyatt Tahoe and IVGID to improve the migration potential of Incline Creek.
Under Impacts, 3rd paragraph - The baffles for fish movement that were originally installed in the 2000 foot long culvert have never been maintained by Ski Incline. Some of the baffles are in disrepair.
Last line on page - Replace the words "fish ladder" with the word "baffles".

Page 91
1st line on page - Change "is" to "were".
Under Mitigation where the words "fish ladder" occur replace with the word "baffles".

Page 92
1st line on page - Change "excessive" to "any".

Page 95
Last paragraph, line 6 - Change "fishering" to "fisheries".

We hope the above comments will assist the project and governing agencies in the development and planning processes. If there are any questions regarding this matter, please advise.

Sincerely,

William A. Molini

William A. Molini
Director

REL:smc

cc: Region I
Ted Frantz

NEVADA STATE CLEARINGHOUSE

RECEIVED
NOV 1 ? 19..
ENVIRONMENTAL PROTECTION

OFFICE OF COMMUNITY SERVICES
1100 EAST WILLIAM, SUITE 117
CARSON CITY, NEVADA 89710
885-4420

TO:

__ Governor's Office
__ Attorney General
__ Administration
__ Agriculture
__ Commerce
__ Community Services
__ State Job Training Office
X Economic Development
__ Education
__ Employment Security Department
__ Dept. of Minerals
__ Equal Rights Commission
__ Human Resources
__ Indian Commission

__ Labor Commission
X Legislative Counsel Bureau
__ Library
__ Prisons
__ Public Service Commission
__ Taxation
__ Transportation
__ UNR-Bureau of Mines
__ UNR-Dept. of Range, Wildlife, and Forestry
X X Wildlife
__ Press Room-Capitol Building
__ Nuclear Waste Project Office
__ SOICC
__ State Communications Board

Conservation and Natural Resources

X State Lands
__ Conservation Districts
X Environmental Protection
X Forestry
X Hist. Preservation & Archeology
X X State Parks
__ Water Planning
__ Water Resources
__ ______________
__ ______________
__ ______________

FROM: John B. Walker, Coordinator

SAI NV # 87300047

PROJECT: Draft EIS, Ski Incline Master Plan

Attached for review and comment is a copy of the aforementioned project. Please evaluate it with respect to:

1) the program's effect on your plans and programs;
2) the importance of its contribution to State and/or areawide goals and objectives;
3) its accord with any applicable law, order or regulation with which you are familiar and/or
4) additional considerations.

PLEASE SUBMIT YOUR COMMENTS NO LATER THAN 12/30/86. Type your comments if applicable, check the appropriate box below and return the form to this office. **PLEASE DO SO EVEN IF YOU HAVE NO COMMENT** on this particular project so that we may complete our processing. If you are unable to comment by the prescribed date, please notify this office. Reviewers may substitue this form with agency letterhead. If letterhead is used, please site the SAI number listed above in your comment.

THIS SECTION TO BE COMPLETED BY REVIEWING AGENCY:

__ No comment on this project
__ Proposal supported as written
__ Additional information (see below)

__ Conference desired (see below)
__ Conditional support (outlined below)
__ Disapproval of funding (must specify reason below)

Comments: (use additional sheets if necessary)

L.H. Dodgion/tr — Reviewer's Signature
Administrator — Title
885-4670 12/17/86

RICHARD H. BRYAN, *Governor*

STATE OF NEVADA

Administration 702/885-4670
Air Quality 885-5065
Construction Grants 885-5870

Groundwater 702/885-4670
Waste Management 885-4670
Water Pollution 885-4670

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL PROTECTION
201 South Fall Street
Carson City, Nevada 89710

December 17, 1986

CLEARINGHOUSE COMMENTS

SAI NV# 87300047

Draft EIS, Ski Incline Master Plan

AIR-Lowell Shifley

Air permitting is handled by Washoe County.

WATER-Richard Thomas

The Nevada Division of Environmental Protection has stream water quality data since 1967 on West Fork Incline Creek at Hwy 27 and Incline Creek at Lakeshore Drive for 22 parameters. Also see USGS open file Report 76-483, pp. 14 entitled "Miscellaneous Hydrologic Data Collected During a Reconnaissance of Streamflow and Fluvial Sediment Transport, Incline Village Area, Lake Tahoe, Nevada, 1970-1793.

Mitigation:

Part C. This section should include the additional exclusion of see page zones, springs and glades.

Part I. Diverting spring flow to irrigation uses would decrease flow in the tributaries. Irrigation is fine if it applies to slope vegetation and not ornamentals around the condos.

WASTE-Verne Rosse

No comment.

GROUNDWATER-Dan Gross

Interception devises to intercept surface and ground-water flows (p. 165, Water Quality, #3) should be designed and located consistant with TRPA's Best Management Practices.

NEVADA STATE CLEARINGHOUSE

OFFICE OF COMMUNITY SERVICES
1100 EAST WILLIAM, SUITE 117
CARSON CITY, NEVADA 89710
885-4420

TO:

- ___ Governor's Office
- ___ Attorney General
- ___ Administration
- ___ Agriculture
- ___ Commerce
- ___ Community Services
- ___ State Job Training Office
- X Economic Development
- ___ Education
- ___ Employment Security Department
- ___ Dept. of Minerals
- ___ Equal Rights Commission
- ___ Human Resources
- ___ Indian Commission
- ___ Labor Commission
- X Legislative Counsel Bureau
- ___ Library
- ___ Prisons
- ___ Public Service Commission
- ___ Taxation
- ___ Transportation
- ___ UNR-Bureau of Mines
- ___ UNR-Dept. of Range, Wildlife, and Forestry
- X X Wildlife
- ___ Press Room-Capitol Building
- ___ Nuclear Waste Project Office
- ___ SOICC
- ___ State Communications Board

Conservation and Natural Resources

- X State Lands
- ___ Conservation Districts
- X Environmental Protection
- X Forestry
- X Hist. Preservation & Archeology
- X X State Parks
- ___ Water Planning
- ___ Water Resources
- ___ _____
- ___ _____
- ___ _____

FROM: John B. Walker, Coordinator

SAI NV # 87300047

PROJECT: Draft EIS, Ski Incline Master Plan

Attached for review and comment is a copy of the aforementioned project. Please evaluate it with respect to:

1) the program's effect on your plans and programs;
2) the importance of its contribution to State and/or areawide goals and objectives;
3) its accord with any applicable law, order or regulation with which you are familiar and/or
4) additional considerations.

PLEASE SUBMIT YOUR COMMENTS NO LATER THAN 12/30/86. Type your comments if applicable, check the appropriate box below and return the form to this office. PLEASE DO SO EVEN IF YOU HAVE NO COMMENT on this particular project so that we may complete our processing. If you are unable to comment by the prescribed date, please notify this office. Reviewers may substitue this form with agency letterhead. If letterhead is used, please site the SAI number listed above in your comment.

THIS SECTION TO BE COMPLETED BY REVIEWING AGENCY:

- ___ No comment on this project
- ___ Proposal supported as written
- ___ Additional information (see below)
- ___ Conference desired (see below)
- ___ Conditional support (outlined below)
- ___ Disapproval of funding (must specify reason below)

Comments: (use additional sheets if necessary)

See attached.

RECEIVED ON
DEC 31 1986
OFFICE OF
COMMUNITY SERVICES

Rick Jones — Reviewer's Signature
Resource Mgmt. Officer — Title
849-2530 — Phone
12/26/86 — Date

STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

ROLAND WESTERGARD, *Director*
Department of Conservation
and Natural Resources

LOWELL V. "Lody" SMITH
State Forester Firewarden

DIVISION OF FORESTRY
885 Eastlake Boulevard
Carson City, Nevada 89701
(702) 849-2500

RICHARD H. BRYAN
Governor

DAVID FREITAS
Western Area Forester

December 29, 1986

TO: David Freitas

FROM: Rick Jones

SUBJECT: Draft EIS; Ski Incline Master Plan

The draft EIS seems complete and addresses the major impacts of the proposed ski area. I cannot see anything that has been missed in the evaluation.

The removal of timber from the ski runs by helicopter or over the snow will be very costly. Actual revenue from the sale of the timber will not pay for the cost of removal as most of the timber is low quality second growth timber. Most of the larger trees on the site are culls with extensive decay in the trunks and are not even good for firewood.

It will be interesting to see how this proposal is received by TRPA.

Rick Jones

Rick Jones
Resource Management Officer

RJ:sm

NEVADA STATE CLEARINGHOUSE

RECEIVED
NOV 18 1986

OFFICE OF COMMUNITY SERVICES
1100 EAST WILLIAM, SUITE 117
CARSON CITY, NEVADA 89710
885-4420

TO: Division of Historic Preservation and Archeology

	Governor's Office		Labor Commission
	Attorney General	X	Legislative Counsel Bureau
	Administration		Library
	Agriculture		Prisons
	Commerce		Public Service Commission
	Community Services		Taxation
	State Job Training Office		Transportation
X	Economic Development		UNR-Bureau of Mines
	Education		UNR-Dept. of Range, Wildlife, and Forestry
	Employment Security Department	X	Wildlife
	Dept. of Minerals	X	Press Room-Capitol Building
	Equal Rights Commission		Nuclear Waste Project Office
	Human Resources		SOICC
	Indian Commission		State Communications Board

Conservation and Natural Resources

X	State Lands
	Conservation Districts
X	Environmental Protection
X	Forestry
X	Hist. Preservation & Archeology
X	State Parks
	Water Planning
	Water Resources
	_____
	_____
	_____

FROM: John B. Walker, Coordinator

SAI NV # 87300047

PROJECT: Draft EIS, Ski Incline Master Plan

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1) the program's effect on your plans and programs;
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___ No comment on this project	___ Conference desired (see below)
___ Proposal supported as written	___ Conditional support (outlined below)
___ Additional information (see below)	___ Disapproval of funding (must specify reason below)

Comments: (use additional sheets if necessary)

Please see attached memorandum.

Reviewer's Signature	Title	Phone	Date
Allen M. Burke	Staff Archeologist	(702) 885-5138	12/30/86

RICHARD H. BRYAN
Governor

STATE OF NEVADA

ROLAND D. WESTERGARD
State Historic Preservation Officer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF HISTORIC PRESERVATION AND ARCHEOLOGY
201 S. Fall Street
Capitol Complex
Carson City, Nevada 89710
(702) 885-5138

December 30,1986

M E M O R A N D U M

TO: John Walker, Office of Community Services

FROM: Alice M. Becker, Staff Archeologist Alice M. Becker

SUBJECT: Draft EIS, Ski Incline Master Plan, SAI NV# 87300047

The Division is satisfied that significant cultural resources were identified during an archeological/historical survey of the project area. We agree with the U.S. Forest Service that the North Flume is eligible for inclusion in the National Register of Historic Places. The mitigation recommendations are adequate to ensure the protection of this and other National Register eligible properties in the Ski Incline project area. However, the access road which would repeatedly cross the flume, would have an adverse effect on the resource.

Subsequent to publication of the draft EIS, consultants working for the Incline Village General Improvement District (IVGID) have indicated that the road will likely not be constructed thus avoiding impacts to the Flume. This should be noted in the final EIS.

Provided IVGID agrees to drop construction of the road and that no other changes are made to the document, the Division will concur that the proposed work will have no effect on properties of National Register quality.

APPENDIX E

LEGEND

1 Blasting and movement of granite rock

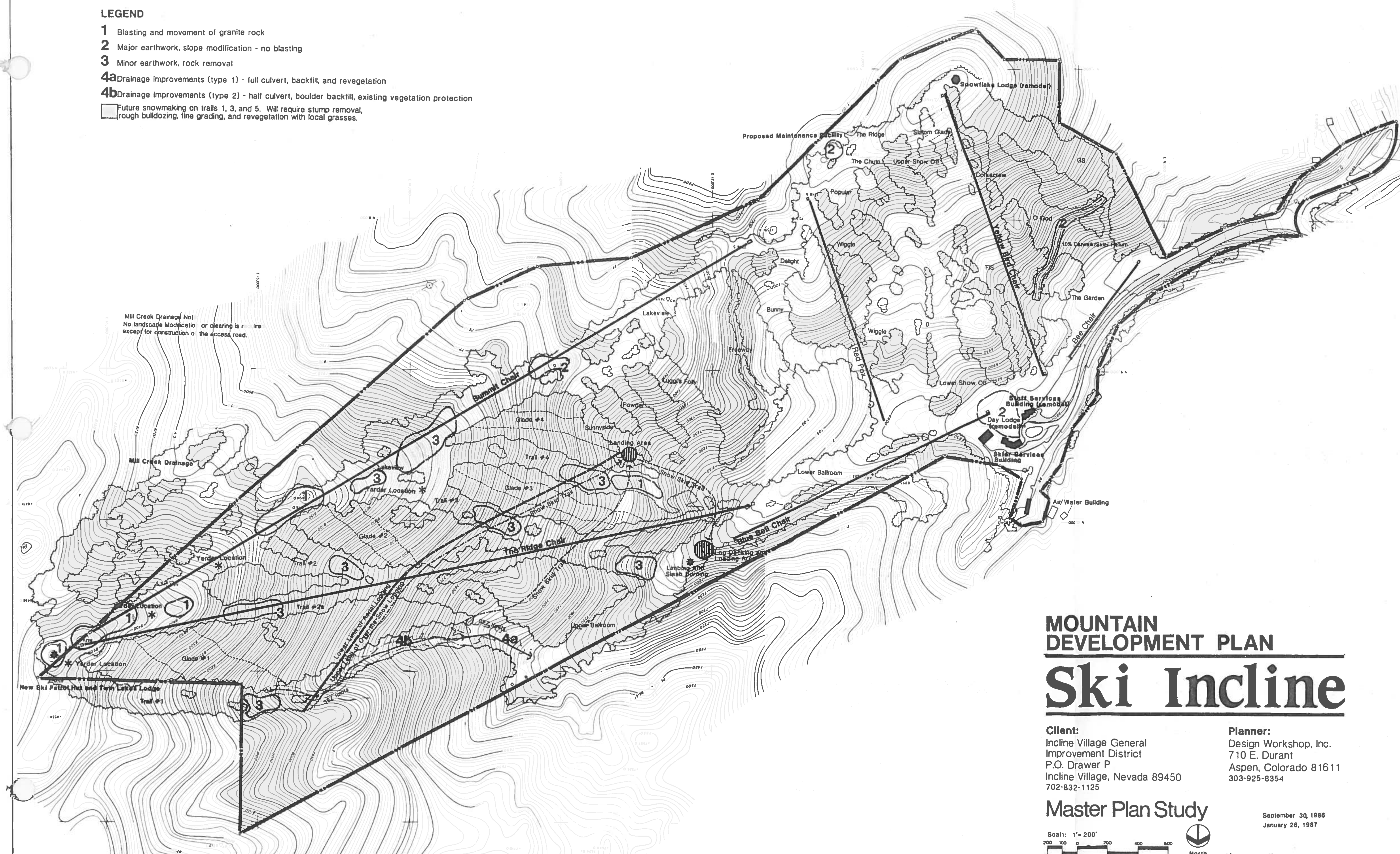
2 Major earthwork, slope modification - no blasting

3 Minor earthwork, rock removal

4a Drainage improvements (type 1) - full culvert, backfill, and revegetation

4b Drainage improvements (type 2) - half culvert, boulder backfill, existing vegetation protection

Future snowmaking on trails 1, 3, and 5. Will require stump removal, rough bulldozing, fine grading, and revegetation with local grasses.



MOUNTAIN DEVELOPMENT PLAN

Ski Incline

Client:
Incline Village General Improvement District
P.O. Drawer P
Incline Village, Nevada 89450
702-832-1125

Planner:
Design Workshop, Inc.
710 E. Durant
Aspen, Colorado 81611
303-925-8354

Master Plan Study

September 30, 1986
January 26, 1987

Scale: 1" = 200'

200 100 0 200 400 600

North