DRAFT ENVIRONMENTAL ASSESSMENT
June 9, 2000

Project Name: Hilltop Gravel Pit **Proposed Implementation Date:** June 15, 2000
Proponent: Schellinger Construction
Type and Purpose of Action: The applicant proposes to mine, crush, wash, stockpile, and transport 250,000 cubic yards of sand and gravel and occasionally batch asphalt from an 18-acre site located 20 miles west of Kalispell, ½ mile west of the Marion turnoff along Hwy. 2. The site would be mined no deeper than 20 feet during the first two years during which time groundwater data will be recorded. Then, after two years and analysis of data collected, mining may be allowed to go deeper in the remaining years, but will not intercept the groundwater. The reclaimed use would be pasture. The site would be reclaimed by re-contouring and re-topsoiling the mine, facility and stockpile area and reseeding the site with grasses. The finished slopes of the pit would be reduced to at least 3:1. Reclamation would be completed in approximately 2010.
Location: S½ SW¼ Section 14, T27N, R24W **County:** Flathead

N = Not present or No Impact will occur.
Y = Impacts may occur (explain under Potential Impacts).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are their unusual geologic features? Are there special reclamation considerations?	**[N]** The proposed operation is located in a glacial alluvial valley in sands and gravels of the Quaternary to Recent geologic age. The valley fill sediments in that area are bound by the Precambrian aged metasedimentary rocks of the Salish Range to the north and southeast, Marion Peak to the southwest and Little Bitterroot Lake to the west. The valley fill sediments appear to have been largely deposited in a glacial environment with some intermixed episodes of fluvial (river) and lacustrine (lake) deposition. The mine area would have all available soil stripped and salvaged. The facility and stockpile areas would have 12 inches of soil material and 12 inches of overburden stripped and salvaged. The soil is a silty clay loam. There are no fragile, compactible, or unstable soils present, unusual geologic features, or special reclamation considerations. The reclaimed slopes will be reduced to a 3:1 or flatter angle.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	**[N]** There is no surface water within a mile of the site. The site would be mined with available equipment such as dozers, scrapers and loaders. There would be no discharge from the pit area. There is a water well on the minesite. There are at least 30 water wells in Section 14, drilled an average of 103 feet deep, with static water levels of 44 feet that yield 44 gallons per minute. In Section 23 there are at least 13 wells that average 222 feet in depth, with static water levels of 36 feet that yield 52 gallons per minute The mine will not intercept potable water or otherwise effect these wells. The upper 20 feet to more than 40 feet of material beneath the surface in the domestic water supply wells located around the proposed pit in Sections 14 & 23 in close proximity to the pit are comprised of a clayey gravel which does not appear to yield adequate water supplies to individual wells. The best producer of water in the area appears to be from a sand and/or gravel aquifer located beneath the upper 20 to 40+ feet of clayey gravel. Well depths in the vicinity of the proposed pit range from less than 10 feet to greater than 400 feet below ground surface. The majority of wells are completed to a depth of less than 100 feet in the shallow sand/gravel aquifer. The specific capacity (gallons per minute per foot of drawdown [gpm/ft])

	measured in wells completed to less than 100 feet range from 1.2 to 20.0 gpm/ft and average 4.2 gpm/ft. Wells completed to a depth of greater than 100 feet have specific capacities ranging from 0.04 to 0.56 gpm/ft and an average specific capacity of 0.23 gpm/ft. These measurements suggest that the best well yields are derived from the shallow (less than 100 foot deep) sand/gravel aquifer in the vicinity surrounding the proposed pit. Water levels recorded in the wells located close to the proposed pit indicate that water depth ranges from 20 to 30 feet below ground surface in that vicinity, closer to 30 feet where the pit will be dug in the first 2 years. The proponent would mine no deeper than 20 feet during the first two years. The water well on site was drilled and tested in November of 1997 with a static water level of 32 feet and tested again in May of 2000 by DEQ with a water level of 36 feet. This shows a fluctuation of at least 4 feet. The Marion Fire District well was drilled and tested in August of 1982 with a static water level of 38 feet and tested again in May of 2000 by DEQ with a water level of 50 feet. The drop in water table there was 12 feet. This data shows a difference in high and low water table in the area of 4 to 12 feet possibly increasing toward the north. The wells were drilled in the late summer when the water table should have been at its lowest level. That suggests the 4 to 12 foot difference from high to low water table may be conservative and could be much greater. Local residents have reported that their water wells have gone dry in the late summer when demands are high. There will be two observation wells drilled on site and a program of monitoring and chemical sampling will be implemented to check the quality and static water levels of the local aquifer. Water chemistry will be tested annually, and water table data will be recorded every month for at least two years to determine the annual rise and fall of the water table. Schellinger may then apply to mine the site deeper depending on data collected, with the ultimate goal of staying at least three feet above the water table while extracting the most gravel possible. Depending on the data collected, the mine depth may be allowed to go deeper or required to be shallower in order to stay comfortably out of the rising and falling groundwater. A bulk fuel storage tank will be located within a lined, earthen berm on site. The wash plant operates approximately the same hours as the crusher and will settle out natural fines from the native sands and gravels mined and crushed at the pit. Settling ponds will remove silt and sand and the water will be recycled. No discharge will come from the ponds. Make up water will be supplied from the on site water well. No chemicals will be used, so percolation down toward the water table of wash water should filter out sediment quickly and will not pose a problem to water quality. Mining will not intercept groundwater. If groundwater is detected, the pit will be backfilled and the floor of the pit will remain three feet above the water table. The proponent will not need to obtain a Stormwater Discharge Permit from the Montana Department of Environmental Quality, but will implement best management practices to prevent any off site erosion or sedimentation.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	**[Y]** Air quality will be degraded, but the proponent must comply with air quality standards and an Air Quality Permits obtained from the Montana Department of Environmental Quality for the crusher and asphalt plant. Some dust will be generated from the operation and the asphalt plant will emit odors that may be offensive to some individuals.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?	**[N]** Vegetation on the site of the proposed operation consists of native fescue, pine grass, smooth brome, various wheatgrasses, Douglas fir, quackgrass and roses, and covers 80% of the ground. All vegetation will be stripped off and grasses compatible with the reclaimed use will be planted. A literature search was done by the Montana Natural Heritage Program and no

	threatened or endangered plants or animals or rare plants or cover types were identified and none were identified during a ground search.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	**[N]** The site is utilized to some extent by deer, rodents, and various species of birds.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	**[Y]** A ground search was conducted and no threatened or endangered species or identified habitats were found on the site.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	**[N]** A field inspection was conducted and no resources were found.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[Y] The proposed operation is located in a clear cut and will be very visible to traffic along Highway 2. A 50 foot buffer will be maintained between the pit and the highway right of way to reduce impacts on highway traffic. The project is long termed with reclamation being planned for the year 2010. However, the permit can be extended by the applicant at any time by applying for an amendment. The pit is visible to residences and businesses in the area. The topsoil will be pushed up into a berm along the west side of the permit area to provide a sight and sound buffer to the nearby residences and campground. The berm will be rounded and planted with grasses. A portable asphalt plant will be brought in for temporary setup to batch asphalt for projects once in a while. No schedule can be predicted for the projects, but typical hours of operation for the plant would be around 40 hours per week. Normally, this would mean four, ten hour shifts per week, during weekdays. There may be an occasional project where hot plant shifts could be increased for a special need, but those would be rare. The standard hours of operation will be from 7:00 a.m. to 7:00 p.m., Monday through Friday where operations such as crushing, screening, washing or hot plant operations are within 500 ft of a suitable residence. However, when the previously mentioned activities are greater than 500 ft from those same dwellings, hours of operation will be from 6:00 am to 10:00 p.m. Monday through Friday for no more than three weeks at any one time, with a two month break between the extended hours of operation. If all residents and/or residence owners sign a waiver to accept hours beyond the above specified hours, a request will be made for any exception to those hours by amending this plan.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	**[N]**
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?	**[N]**

IMPACTS ON THE HUMAN POPULATION

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	**[Y]** There will be increased hazards because of the equipment activity and hauling of the sand and gravel. The applicant must comply with OSHA and MSHA regulations however, proper precautions will be taken to avoid accidents.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	**[N]**

13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	**[N]**
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	**[N]**
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	**[N]** The site will require periodic site evaluations, but these will be done in conjunction with other operations in the area.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	**[N]** County zoning clearance has been obtained.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	**[N]**
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	**[N]**
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	**[N]**
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	**[N]**
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	**[N]**

22. Alternative # 1: Denial. The applicant would have to seek a site elsewhere to move the impacts away from this site. The owner of the gravel resource (in this case, the owner is also the operator) would be denied full utilization of his property at this time.

Alternative # 2: Approval with provisions in the permit for water protection, topsoil salvage, dust control, etc.

23. Public Involvement, Agencies, Groups or Individuals contacted: State Historic Preservation Office, Montana Heritage Program, Flathead Regional Development Office and Weed Management Board, residences in the area were contacted for comments. Comments were received which included many letters, emails and a petition opposing the proposal signed by 150 people from the Marion and Kalispell area. A public meeting will be held at the Marion School to provide the results of the department's analysis of the local groundwater, and to answer general questions about the impacts of the proposed permit.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed: Montana Department of Environmental Quality for Air Quality Permit; Mine Safety and Health Administration for safety permit.

25. Magnitude and Significance of Potential Impacts: Impacts are unlikely to be significant because of the proposed operation's location and the lack of critical wildlife or plant species or habitats.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

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Signature Date