

DRAFT
CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name: Spotted Chance Site
Proponent: A-1 Paving, Inc.

Proposed Implementation Date: 10/28/96

Type and Purpose of Action: The applicant proposes to mine, crush, stockpile and transport 110,000 cubic yards of sand and gravel from a 7 acre pit and batch asphalt at a site located 3 miles north of the town of Corvallis. The estimated start-up date is October 28, 1996 and will result in a pond approximately 20 feet deep. The pit will be reclaimed to a fishery/stockwater pond after grading the slopes to at least a 5:1, replacing all topsoil on the slopes and facility area, and re-seeding.

Location: NW¼NW¼ Sec. 21, T7N, R20W

County: Ravalli

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
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>[Y] The proposed mine is located in a rolling glacial outwash area that overlies the foothills of the Sapphire Mountains. The area was last inundated by Lake Missoula 10,000 years ago. The deposit consists of stratified layers of alluvium and glacial outwash sand and gravel that covers the deeper bedrock. The slope faces north/northwest and is fairly well drained.</p> <p>The Bitterroot Valley below occupies an intermountain fault basin between the granitic batholith rocks of the Bitterroot Mountains to the west and the granitic-injected precambrian sedimentary Sapphire Range to the east. The 70 to 90 million year old Cretaceous granitic rocks of the Bitterroot Mountains to the west were sculpted into their present profiles by alpine glaciers. The Bitterroot River Valley fills the bottom of the intermountain, fault block basin at the south end of the Rocky Mountain Trench.</p> <p>Up to six inches of topsoil will be salvaged and stockpiled away from the affected land. Following mining, grading and ripping, the soils will be replaced, disced and seeded.</p>

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?

[Y] The nearest pre-mining surface water is the cattail slough along the west edge of the site which was left from previous mining, and the irrigation water return canal which flows along the east side of the site. The proponent may be required to obtain a Stormwater Discharge Permit from the Montana Department of Environmental Quality, to assure the protection of nearby surface waters including the cattail slough and irrigation canal.

The site will be mined to a depth of 20 feet which intercepts nearly 15 feet of groundwater, estimated to be four to five feet below the surface in places.

Groundwater is shallow in the area, and the sands and gravels display high permeability. There are several existing residences located north and west of the site with domestic water wells that show a static water level of three to ten feet below the surface. There are 27 water wells within one quarter mile of the site, mostly less than 50 feet in depth, with very high yields. Special precautions will be taken to minimize possible contamination of the groundwater. All fuel and bulk lubricants will be kept within a lined, earthen-bermed fueling impoundment. The asphalt plant has a 10,000 gallon diesel fuel tank and a 55,000 gallon asphalt tank attached to it, which will be located up out of the pit. Other portable crushers and screens with fuel tanks are located in various places within the facility. Any accidental spills or leaks from equipment will be excavated and disposed of. No waste or trash will be disposed of at the site. With these precautions, the quality and quantity of the groundwater should not be adversely impacted.

Hydrologic impacts of the proposed expansion are not likely to cause any measurable change in the groundwater quality or water levels on property surrounding the site. This assumption is based on the fact that there will be no de-watering of the pit, and the pond will quickly attain equilibrium with surrounding static water levels due to the high permeability of the sands and gravels.

<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[Y] Air quality will be degraded and there will be an increase in particulate matter. Crushers, screens and trucking equipment typically cause dusty conditions in disturbed soil sites. Water bars, road watering and other dust controls will be used as necessary. Asphalt production also degrades the air quality but the operator must obtain air quality permits and abide by state air quality regulations.</p> <p>Applicable federal regulations for air quality which are implemented by the state are the Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart I (Asphalt & Concrete Plants) and Subpart 000 (Nonmetallic Mineral Processing Plants). Subpart I sets particulate and opacity limitations on emissions from the asphalt plant. The particulate limitation must be verified by performance (stack) testing. Subpart 000 sets an opacity limitation on fugitive dust emissions from the gravel crushing and handling operations.</p> <p>Cumulative Impacts - There may be many trucks and various highway construction types of equipment on and near the site during the highway project.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] There are no known rare or sensitive plants in the area. Vegetation consists of pasture grasses such as brome, bluegrass and quackgrass which lie on a level pasture. Vegetation covers 100% of the ground and will be removed and planted with species compatible with the proposed reclaimed use. Because of the short time frames, plant seeds and roots will remain viable in the soils. There is a moderate infestation of spotted knapweed, a legally defined noxious weed and bull thistles in and around the site.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] Although the area is used primarily for grazing, it also supports populations of whitetail deer, waterfowl, rodents, song birds, coyotes, foxes, insects and various other animal species. Population numbers for these species is not known. There are rookeries of blue herons and nesting sites of ospreys and bald eagles along the Bitterroot River. The creation of a pond with fish stocked in it will provide increased fishing opportunities for these species.</p> <p>Human use of the area has intensified in the past two decades with the increase in residential and commercial activity. The proposed mine is not expected to significantly degrade wildlife populations. The Natural Heritage Program literature search and site evaluations have not revealed any other endangered or threatened plant or animal species on site that would be significantly impacted. Seed head gall flies have been introduced to the tract to provide biological control of noxious weeds.</p>

<p>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?</p>	<p>[N] The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected. Bald eagles are known to range all along the Bitterroot River Valley, but no nesting sites are known on or near the proposed permit area. No adverse effects are anticipated on the eagles as a result of this proposed action.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Although there are important cultural values in the general area, this site has been previously disturbed by modern man, thus destroying the integrity of resources that may have existed. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator will give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation will be routed around the site of discovery for a reasonable time until salvage can be conducted. The State Historical Preservation Office will be promptly notified.</p>
<p>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?</p>	<p>[Y] The site is located in a scenic, but not unique area. There will be a temporary deterioration of aesthetics while the operation is under way. However, reclamation will return the area to a visually acceptable landscape.</p> <p>The site is visible by homes in the local area and to traffic along the Eastside Highway. Floodlights from dark period operations increase visibility and awareness of the operation.</p> <p>Noise will not increase from present levels when equipment is active. Noise levels are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss.</p> <p>There is also noise from truck traffic hauling to various projects. These impacts are intermittent and of relatively short duration.</p>
<p>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?</p>	<p>[N]</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?</p>	<p>[N]</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	<p>[Y] Heavy equipment and facilities including trucks, loaders, crushers, asphalt and wash plants will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator will employ proper precautions to avoid accidents.</p> <p>Excessive and prolonged noise and light could increase stress for nearby residents and induce difficulty sleeping. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed operation should not significantly affect human health. The operator will employ proper precautions to avoid accidents.</p>
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] The acreage listed in the Type and purpose of Action will be taken out of agricultural/grazing and put into industrial/commercial use. Upon completion of mining, the land will be returned to its previous use and a pond. The pond will provide some additional wildlife habitat.
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] To this date it has not been shown that the current operation has resulted in a reduction in taxable value of property and it is not anticipated that this expansion would alter past assessments. The presence of an industrial site in the midst of an agricultural/rural residential area has the potential to reduce the desirability of surrounding land as a location to live a rural lifestyle, and therefore the marketability of improved and unimproved real estate may be diminished as some prospective buyers would not purchase these properties. The area proposed to be expanded for mining has been used as a gravel source for many years however, so it could be assumed that because residential building has encroached around this site, those purchasers did not find the use objectionable.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	<p>[Y] The operation will require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.</p> <p>Cumulative Impacts - The potential for gravel mining and other highway construction to proceed concurrently exists. Road projects requiring pit run, processed gravel or asphalt on the Eastside Highway exists. Signing and flagpersons would be useful in regulating traffic patterns.</p>
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] City/County zoning clearance has been obtained.

Montana Bureau of Mines and Geology
Water Well Log Data

10/21/1996

Location: 07N 20W 21
 Site Name: SUTHERLAND DAN
 Depth: 30.0
 Yield: 100.0
 Static Water Level: 8.00
 Pumping Water Level: 25.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1982

Location: 07N 20W 21
 Site Name: MARSHALL GEORGE
 Depth: 79.0
 Yield: 40.0
 Static Water Level: 58.00
 Pumping Water Level: 68.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1984

Location: 07N 20W 21 BB
 Site Name: LIEDLE DOUGLAS
 Depth: 10.0
 Yield: 50.0
 Static Water Level: 6.00
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	0.00	

Year drilled: 1962

Location: 07N 20W 21 BB
 Site Name: LIEDLE DOUGLAS
 Depth: 28.0
 Yield: 30.0
 Static Water Level: 2.00
 Pumping Water Level: 12.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1968

Location: 07N 20W 21 BBA
 Site Name: WEIS MARTIN
 Depth: 40.0
 Yield: 30.0
 Static Water Level: 5.00
 Pumping Water Level: 25.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1983

Location: 07N 20W 21 CA
 Site Name: POPHAM CLARENCE
 Depth: 50.0
 Yield: 100.0
 Static Water Level: 15.00
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1957

Location: 07N 20W 21 CC
 Site Name: HESTEKIN BRYAN M.
 Depth: 65.0
 Yield: 40.0
 Static Water Level: 55.00
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1928

Location: 07N 20W 21 CCA
 Site Name: GASVODA JAY
 Depth: 40.0
 Yield: 12.0
 Static Water Level: 6.00
 Pumping Water Level: 30.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1980

Location: 07N 20W 21 CCA
 Site Name: BOSKET DAVE
 Depth: 33.0
 Yield: 89.0
 Static Water Level: 6.00
 Pumping Water Level: 15.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type

0.00 0.00 6.00

Year drilled: 1978

Location: 07N 20W 21 CCA
 Site Name: CRITES JOHN
 Depth: 39.0
 Yield: 100.0
 Static Water Level: 7.00
 Pumping Water Level: 34.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
-1.50	39.00	6.00	

Year drilled: 1994

Location: 07N 20W 21 CCB
 Site Name: SHONKWILER LINCOLN N AND EVAGENE
 Depth: 40.0
 Yield: 20.0
 Static Water Level: 8.00
 Pumping Water Level: 8.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
-1.80	40.00	6.00	

Year drilled: 1990

Location: 07N 20W 21 CCB
 Site Name: LINDQUIST BOB S
 Depth: 40.0
 Yield: 15.0
 Static Water Level: 12.00
 Pumping Water Level: 35.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1987

Location: 07N 20W 21 CCB
 Site Name: TANNER W.F.
 Depth: 40.0
 Yield: 20.0
 Static Water Level: 3.00
 Pumping Water Level: 15.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1985

Location: 07N 20W 21 CD
 Site Name: HOLLORON MAURICE J.

Depth: 14.0
 Yield: 250.0
 Static Water Level: 0.00
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	30.00	

Year drilled:

Location: 07N 20W 16
 Site Name: STATON R E
 Depth: 9.0
 Yield: 850.0
 Static Water Level: 0.00
 Pumping Water Level: 5.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	24.00	

Year drilled:

Location: 07N 20W 16 CA
 Site Name: WEBER MILTON A.
 Depth: 29.0
 Yield: 20.0
 Static Water Level: 4.00
 Pumping Water Level: 19.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1970

Location: 07N 20W 16 CA
 Site Name: CHAFFIN RICHARD
 Depth: 30.0
 Yield: 200.0
 Static Water Level: 4.00
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1988

Location: 07N 20W 16 CA
 Site Name: O'BRIEN FRANK N.
 Depth: 21.0
 Yield: 1000.0
 Static Water Level: 0.00
 Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	0.00	

Year drilled: 1934

Location: 07N 20W 16 CB
 Site Name: HILL EDWIN C.
 Depth: 30.0
 Yield: 20.0
 Static Water Level: 4.00
 Pumping Water Level: 22.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	6.00	

Year drilled: 1972

Location: 07N 20W 16 CC
 Site Name: AXTILL PAUL
 Depth: 12.0
 Yield: 5.0
 Static Water Level: 12.00
 Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	0.00	

Year drilled: 1955

Location: 07N 20W 16 CCC
 Site Name: AXTELL PAUL
 Depth: 35.0
 Yield: 300.0
 Static Water Level: 6.00
 Pumping Water Level: 30.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	-1.50	35.00	6.00	

Year drilled: 1991

Location: 07N 20W 16 CCD
 Site Name: MT DEPT OF HWYS * CORVALLIS N & S
 Depth: 36.5
 Yield: 0.0
 Static Water Level: 4.70
 Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	0.00	

Year drilled: 1992

Location: 07N 20W 16 CCD
 Site Name: MT DEPT OF HWYS * CORVALLIS N & S
 Depth: 35.4
 Yield: 0.0
 Static Water Level: 5.10
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	0.00	

Year drilled: 1992

Location: 07N 20W 16 CD
 Site Name: STATON R. E.
 Depth: 31.0
 Yield: 50.0
 Static Water Level: 25.00
 Pumping Water Level: 25.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	4.00	

Year drilled: 1958

Location: 07N 20W 17 DAD
 Site Name: HAMILTON JAMES * CORVALLIS MT
 Depth: 69.0
 Yield: 0.0
 Static Water Level: 3.28
 Pumping Water Level: 0.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled:

Location: 07N 20W 17 DAD
 Site Name: HAMILTON JAMES L.
 Depth: 69.0
 Yield: 60.0
 Static Water Level: 4.00
 Pumping Water Level: 63.0

Casing: Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
0.00	0.00	6.00	

Year drilled: 1977

Location: 07N 20W 17 DD
 Site Name: BROWN OTTO & ANNIE
 Depth: 40.0

Yield: 60.0
Static Water Level: 40.00
Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	0.00	

Year drilled: 1960