WARRIOR MET COAL BC, LLC.

BLUE CREEK MINE NO. 1, P-3964, R-9

ALABAMA SURFACE MINING COMMISSION

SURFACE MINING PERMIT APPLICATION

P A R T I I I

Prepared by:

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PART III - OPERATION PLAN

A. General Operation Information

1. Describe the type and method of coal mining procedures and major equipment to be used. (780.11)

   See Attachment III-A-1.

2. Describe the sequence and timing of increments to be mined (as shown on permit map) over the total life of the permit. (780.11)

   See **Permit Map 4 of 4**

   The timing increments are as follows:

Increment No.	Acres	Dates	
		From	To
1	373	Effective Date *	Life of Mine
2	14	Effective Date *	Life of Mine
3	196	Effective Date *	Life of Mine
4	258	Effective Date *	Life of Mine
5	48	Effective Date *	Life of Mine
6	113	Effective Date *	Life of Mine
7	3	Effective Date *	Life of Mine

*The Effective Date depends on the date of issuance of permit.

OPERATION PLAN

The proposed additional permit area will be used for coal transportation from the underground coal mine (P-3964) to a proposed coal rail loading facility (P-4003). This area will be a conveyor beltline corridor for coal transportation, and ancillary roads for access to the beltline for service and maintenance.

Beltline

Construction of the beltline will begin with the clearing and grubbing of the proposed beltline site. Grading will occur in areas that need to be modified to accommodate the beltline conveyor. Equipment used for this construction will consist of dozers, track hoes, and haul trucks for grade work and clearing. Cranes will also be used for setting the conveyor beltline in place. The conveyor belt proposed is a state-of-the-art system with all new technology to help eliminate the chance of any spillage of coal during the transportation to the rail loading facility (P-4003). All necessary BMPs will be implemented during the construction of the beltline to control any runoff from the disturbance of the beltline installation. Any needed BMPs for maintenance operations during the lifetime of the beltline will be implemented. The layout and design of the beltline will match, as close as possible, the existing terrain with minimal grade work needed. With this approach, all efforts will be made to reach a cut/fill balance to eliminate any excess material.

Ancillary Roads

With the construction of the beltline to transport coal from the P-3964 permit to the proposed rail loading facility (P-4003), numerous ancillary roads will be constructed. These ancillary roads will be used during the construction phase of the beltline, and the maintenance and service of the beltline during the life of the P-3964 permit. The ancillary roads will be constructed in the proposed locations seen on the Permit Map and Road Map. The layout and location of the ancillary roads will match, as close as possible, the existing terrain with minimal grade work needed. With this approach, all efforts will be made to reach a cut/fill balance to eliminate any excess material. Each proposed ancillary road location will be cleared and graded as necessary. All necessary BMPs will be implemented during the construction of the ancillary roads to control any runoff from any disturbance. Any needed BMPs for maintenance operations during the lifetime of the use of the ancillary roads will be implemented.

3. Attach a narrative explaining the construction modification, use, maintenance, and removal of the following facilities: (780.11)

(a) Coal removal, handling, storage, cleaning and transportation structures and facilities;

See **Attachment III-A-3**, Part **III-A-5** & Part **III-B-5**

(b) Spoil, coal mine waste and non-coal mine waste removal, handling, storage, transportation and disposal structures and facilities;

See **Attachment III-A-3** & **III-B-2-A** & Part **III-B-5**

(c) Mine facilities; and

See **Attachment III-A-3**

(d) Water pollution control facilities.

See **Attachment III-A-3** & **III-B-2-A**

4. Describe the means to be used to maximize the use and conservation of coal reserves in the permit area. (780.18, 816.59)

No coal will be mined from this property.

5. Describe measures to be taken to ensure that all debris, acid-forming and toxic-forming materials and materials constituting a fire hazard are disposed of in accordance with 816.89 and 816.103; include contingency plans to prevent sustained contingency plans to prevent sustained combustion of such material. (780.18).

   At this mine site, if acid or toxic forming material is encountered, it will be buried within the Slope and or Portal site facilities. It will be buried a minimum of fifty (50') feet away from a major drain and a minimum of 10 feet up from the bottom of the fill. This acid or toxic forming material will be covered with a minimum of four (4') feet of the best available non-acid, non-toxic and non-combustible forming material. This will keep the material above the normal groundwater level at this site.

   For areas such as coal stockpiles, the following measures will be performed as stated above.

   Any material such as oil, grease, rags etc. that may present a fire hazard will be properly disposed of in an approved landfill.

   Any non-coal waste will be disposed of at approved off-site landfills which meet all applicable local, state and federal requirements.

COAL REMOVAL, HANDLING, STORAGE, CLEANING AND TRANSPORTATION AND FACILITIES

The proposed additional permit area will be used for coal transportation from the underground coal mine (P-3964) to a proposed coal rail loading facility (P-4003). This area will be a conveyor beltline corridor for coal transportation, and ancillary roads for access to the beltline for service and maintenance.

There will be no coal removal or coal cleaning within this proposed new permit area.

Any material such as oil, grease, rags etc. that may present a fire hazard will be properly disposed of in an approved landfill. Any non-coal waste will be disposed of at approved off-site landfills, which meet all applicable local, state and federal requirements.

All transportation facilities such as ancillary roads, etc. will be constructed to meet minimum criteria outlined in Part III-B-5, including but not limited to the following: Existing roads in adequate condition will be used, if possible, to eliminate additional disturbance. New roads will be located on ridges or the most suitable slopes available for stability. The minimum width necessary for the proposed roads will be cleared, grubbed and all topsoil removed (if required) and stockpiled for protection. Roadbeds will be constructed by compacting desirable backfill material in lifts to form an adequate sub-grade. Routine maintenance such as regrading may be required in the course of operations to keep the roads in adequate condition. All roads, existing or created for use in this operation, will have adequate sediment control facilities, such as silt fences, hay bale berms, and/or excavated sediment trap sumps constructed where deemed necessary to effectively catch and control sediment from these disturbed areas. All materials used in the construction of the transportation facilities will be non-toxic and non-combustible. Where needed, drainage control structures will be placed below the sub-grade, using prudent engineering practices to construct said structures. Drainage control for the transportation facilities will be accomplished by the use of drainpipes, ditches, cross drains and ditch relief drains. No sustained grades of ten (10%) percent will be constructed unless unavoidable, at which time sediment control facilities such as silt fences, hay dams and/or rock check dams will be installed at strategic locations to prevent erosion and ensure stability. Grades greater than fifteen (15%) percent will require ditch relief drains, cross over drains and road drainways at a minimum of three hundred fifty feet (350') apart. All disturbed areas adjacent to the newly constructed ancillary roads will be revegetated in accordance with the approved Reclamation Plan (Part IV-C-5) immediately following construction. Routine vegetative maintenance will be administered when necessary to maintain a vegetative cover. Maintenance of drainage control facilities including cleaning of road ditches, removal of sediment from structures and minor repairs may be required periodically. When roads are not to be left permanently, at landowners' request, roads will be removed in the following manner: the base material will be hauled offsite and disposed of in an appropriate manner, with the sub-grade and drainage control ditches being plowed up and regraded to the approximate original contour. The original drainage courses will be re-established by regrading and reshaping to blend with the surrounding area. To prevent erosion and provide long term stability, terraces, cross drains, berms, etc. will be constructed,

where deemed necessary. Sediment control measures for all disturbed areas created or existing in the construction or use of proposed or existing haulroads will include but not be limited to the construction or installation of hay dams, silt fences, rock check dams, etc. and will be constructed or installed in strategic locations as deemed necessary on site. These sediment control facilities will be constructed or installed promptly following the construction of said ancillary roads, etc. All disturbed areas will be revegetated in accordance with the approved Reclamation Plan (IV-C-5).

Routine inspections and maintenance (such as regrading, maintenance of sediment control structures, spot replanting, and dust control) will be conducted regularly during the life of each road to ensure that each road continually meets performance standards. Dust control will be achieved by the periodic application of water, chemical binders and/or other dust suppressants. Any road damaged by a catastrophic event, such as a flood, or earthquake, will be repaired as soon as is practicable after the damage has occurred.

See **Part III-B-5** for the ancillary road layout, construction, maintenance requirements and specifications.

SPOIL, COAL MINE WASTE AND NON-COAL MINE WASTE REMOVAL, HANDLING, STORAGE, TRANSPORTATION AND DISPOSAL STRUCTURES AND FACILITIES

The proposed additional permit area will be used for coal transportation from the underground coal mine (P-3964) to a proposed coal rail loading facility (P-4003). This area will be a conveyor beltline corridor for coal transportation, and ancillary roads for access to the beltline for service and maintenance.

Conveyor Belt Corridor

Grading will occur in areas that need to be modified to accommodate the beltline conveyor. The layout and design of the beltline will match, as close as possible, the existing terrain with minimal grade work needed. With this approach, all efforts will be made to reach a cut/fill balance to eliminate any excess material. Any excess material will be spread in thin layers to the approximate original contour within the permitted area and revegetated in accordance with Part IV of this permit. The conveyor belt proposed is a state-of-the-art system with all new technology to help eliminate the chance of any spillage of coal during the transportation from P-3964 to the rail loading facility (P-4003).

MINE FACILITIES

Mine facilities proposed include, ancillary roads and conveyor belt. All of these facilities will be located within the proposed additional permit area. Changes and maintenance such as enlargement and additions to these facilities may occur from time to time as deemed necessary.

Revegetation

Revegetation shall be performed according to the mixtures and application rates given in the Permanent Cover-Mixtures and Rates found in Part IV of the original application. Seeding will commence during the first normal planting season to establish a diverse, effective, and permanent vegetative cover after mining has ceased. Topsoil, subsoil, and overburden material will be systematically sampled at a rate of 1 sample per 3 acres and sent to Auburn University Testing Laboratory, for analysis to determine type and amount of soil amendments necessary to maintain vegetative growth and applied as recommended. Seedbed preparation shall include discing or scarifying the soil to permit seed application and to aid in the mixing of the soil amendments. All areas shall be mulched with hay at a rate of 1 1/2 - 3 ton per acre to control erosion, to promote seed germination, and to increase the moisture retention of the soil.

WATER POLLUTION CONTROL FACILITIES

All BMPs constructed during operations are to collect sediment from the disturbed area during the actual construction phase and during the reclamation and restabilization phase. These BMPs will be constructed, prior to any disturbance within the affected area, under the supervision of the facility superintendent with the assistance of a qualified Registered Professional Engineer or by a qualified person under his direct supervision. Upon completion of construction the entire disturbed area will be revegetated in accordance with the approved Reclamation Plan (IV-C-5).

MODIFICATIONS

No modification plans are necessary due to the BMPs being proposed. If during operations it is necessary to modify any or all of the BMPs, appropriate modifications will be made in the field in coordination with the Regulatory Authority.

MAINTENANCE

Semi-monthly inspections of all BMPs will be made for erosion, instability, proper functioning, etc. until the removal of said BMPs or until Phase III Bond Release. Minor signs of erosion, instability, improper functioning, etc. will be repaired immediately. Standard anticipated maintenance will include repairing rills and gullies, repairing slope failures, re-seeding areas of failed or scarce vegetation, cleaning out or removing debris from drainage structures to allow proper functioning, etc. Hazardous conditions observed during inspections will be reported to the Regulatory Authority for further consultation or instructions.

REMOVAL

All BMPs constructed during operations will be removed prior to a Phase III bond release. Upon removal of the BMP structures, where necessary, the area will be graded to the approximate original contour. All disturbed areas will be graded in such a manner to ensure slope stability, successful restabilization and to minimize erosion. All disturbed areas will be seeded, fertilized and mulched in accordance with the approved Reclamation Plan (IV-C-5). No slope existing or created will be left on a grade that may slip or slough.

1) Exploration Holes – No coal exploration holes will be drilled on this area being added by R-9.

2) Monitoring Wells – There will be no monitoring wells installed on this area being added by R-9.

3) Mine Openings – There are no and will be no mine openings on this area being added by R-9.

4) Gas & Oil Wells – No Gas & Oil wells (Non-Active) will be disturbed on this permit site.

5) Gas & Oil Wells – No Gas & Oil wells (Active) will be disturbed on this permit site.

6) Give a description, including appropriate cross-sections and maps, of measures to be used to seal or manage mine openings, bore holes, wells and other openings within the proposed permit area. (780.18, 816.13-816.15) - There are no and will be no mine openings on this area being added by R-9.

7. Give a description of steps to be taken to comply with applicable water quality laws, regulations and health and safety standards. (780.18)

   Water Quality Laws - All disturbed surface drainage from the proposed mining area will be routed through an approved sediment structure for monitoring and treatment purposes. Monitoring and Reporting will take place as set forth in the approved Monitoring Plan (III-D & III-E) and NPDES requirements. When necessary, drainage will be chemically treated for pH or Iron with hydrated lime or caustic soda. Other treatment such as floating silt fences or flocculation bricks may be administered for Total Suspended Solids. These measures will be taken to remain in compliance with NPDES requirements. MSHA guidelines and regulations will be followed in all operations.

   Certification and training of all mine personnel will be current and updated as approved by MSHA.

   All dust, noise, and other required control test will be current and performed by certified MSHA personnel.

   All records are maintained at the mine and are available for inspection.

8. Is surface mining to be conducted within 500 feet of an underground mine? (780.27, 816.79)
   ( ) Yes (XX) No

   If yes, describe measures to be used to comply with Section 816.79. Attach a map showing the location and extent of known workings in accordance with 780.14(a) (13).

B. <u>Engineering Plans.</u>

All cross sections, maps and plans related to operations, reclamation and structures must comply with Section 780.10. Plans, appropriate calculation and conclusions shall be presented in a clear and logical sequence and shall take into account all applicable factors necessary to evaluate the proposed plan or design.

1. Existing Structures. (780.12, 786.21)

(a) Describe each existing structure to be used, its location, current condition, approximate dates of construction and evidence (including relevant monitoring data) showing whether or not the structure meets the performance standards of Subchapter K or Subchapter B, whichever is more stringent and demonstrate whether or not the use of existing structures will pose a significant harm to the environment or public health or safety.

Not Applicable

(b) If an existing structure requires modification or reconstruction to meet the performance standards, attach a compliance plan that includes design specifications, construction schedule, monitoring procedures, and evidence that the risk of harm to the environment or public health or safety is not significant during modification or reconstruction.

Not Applicable

2. Ponds, impoundments, banks, dams and embankments. (780.25)

(a) Submit a general plan which complies with Section 780.25 (a)(1) for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam or embankment to be located within the proposed permit area.

Not Applicable

(b) Submit detailed design plans, which comply with Sections 780.25(a)(2)(3) and 816.46, for each sedimentation pond to be constructed on the increment you currently propose to mine. If the sediment pond is to remain as a permanent water impoundment, design plans shall also comply with Section 816.49.

Not Applicable

(c) Submit detailed design plans which comply with Sections 780.25(a) (2&3) and 816.49, for each temporary or permanent water impoundment to be constructed on the increment you currently propose to mine.

Not Applicable

(d) Submit detailed design plans, which comply with Section 780.25(a) (2&3) and 816.81-816.85, for coal mine waste bank to be constructed on the increment you currently propose to mine.

Not Applicable

(e) Submit detailed plans which comply with Sections 780.25 (a)(2&3) and 816.91-816.93 for each coal mine waste dam and embankment to be constructed on the increment which you currently propose to mine.

Not Applicable

GENERAL ENGINEERING PLAN CERTIFICATION STATEMENT

I, Jordan McGehee, a licensed professional engineer, hereby certify that the information, cross-sections, data, maps, etc., contained in this general plan in Attachment III-B-2-A is true and correct to the best of my knowledge and belief.

McGehee Engineering Corp.

_____ _____

Jordan McGehee, P.E. Date
Alabama Reg. No. 37129

ADDENDUM TO GENERAL PLAN

The addendum to the General Plan consists of adding 113 acres to Increment No. 6 for overland belt conveyor (112 acres) and ancillary roads (1 acre) as well as adding 3 incidental acres to newly created Increment No. 7 for ancillary roads.

Warrior Met Coal BC, LLC proposes to acquire a Construction Stormwater Permit from the Alabama Department of Environmental Management (ADEM) to control surface runoff during the construction period. The ADEM General Permit approval is attached.

The permit will remain in place during the site grading and construction activities. Best management practices will be used as required by that permit and placed in strategic locations as approved by the permit. See typical BMP drawings silt fences, hay bale dams, rock check dams and sumps. The type of structure will depend on the size of the drainage area. For small areas and sheet flow silt fences and/or hay bale dams will be used. For larger drainage areas rock check dams and/or sumps and sediment traps will be used. Inspections will be performed on all the structures during the life of the permit to ensure they are functioning as required by the permit.

As the final grading of the site nears completion some of the pre-construction structures will be converted from silt fences to rock check dams, sumps and sediment traps due to the increase of drainage areas.

Sediment Basin 061

There is approximately 10 acres of the southernmost end of the conveyor belt corridor that was not included in the ADEM General Permit. These 10 acres drain into Sediment Basin 061. Sediment Basin 061 was originally designed with the worst-case scenario of 21 acres being graded and bare area. This was due to the then planned location of the coal preparation plant. The location of the preparation plant has since been relocated south of Brandon School Road. The proposed use of the previous prep plant location which drains into Sediment Basin 061 is now a clean coal stockpile area. In looking at the area needed for a clean coal stockpile area, WMCM Mine No. 4, Mine No. 5 and Mine No. 7 clean coal stockpile areas were reviewed. They are as follows: Mine No. 4 – 10 acres, Mine No. 5 – 12 acres and Mine No. 7 – 12 acres. Because of the terrain, the majority of the clean coal stockpile area will drain into Sediment Basin 062, which leaves only approximately 15 acres of graded and bare area to drain into Sediment Basin 061 which includes the 10 acres of the southernmost end of the conveyor belt corridor that were not included in the ADEM General Permit. The original design plan for Sediment Basin 061 is more than adequate to treat the anticipated runoff from the proposed disturbed area within its watershed boundary. No modification of Sediment Basin 061 is needed for the area added through this revision R-9.

See Current Conditions Watershed Map.

Perennial Streams

There are no perennial streams located within 100 feet of the additional 116 acres proposed to be added through permit revision R-9. The Wiley U.S.G.S. Quadrangle shows a perennial stream located in the NE¼ of the SW¼ of Section 35, Township 16 South, Range 9 West flowing underneath Earnest Road. The drainage area of this so-called perennial stream is only 46.4 acres as measured from its intersection with the southernmost permit boundary. On November 1, 2023, a site inspection was performed to determine if the drainage course was in fact perennial by definition and had water flowing through it. It was determined and documented (see attached photographs) that this drainage course was bone dry, had no flowing water through it and was therefore non-perennial by definition.

Within the boundary of the additional 116 acres proposed to be added through permit revision R-9 and because of the nature of the proposed activity (overland belt conveyor), numerous drainage courses and upland wetlands were encountered. All drainage courses and wetlands found with the proposed permit area were delineated by qualified/certified stream/wetland delineators to determine the outer boundary of each wetland and the bed, bank and ordinary high-water mark of each drainage course. Upon completion of the field delineation process, all drainage courses and wetlands were field surveyed with the location data submitted to the overland belt conveyor design engineers. The design engineers used the location data to design the conveyor support system (piers/pilons) to span all drainage courses and wetlands. The locations of all access roads connecting public roads to the proposed permit area were also selected and designed to allow access to the entire overland conveyor belt from both sides of a drainage course or wetland without crossing or disturbing the drainage courses or wetlands. There will be no disturbance, filling, dredging, excavation, etc., withing ten (10’) feet of the outer boundary of a drainage course or wetland. Silt fencing, hay bale berms, waddle, and other sediment and erosion control practices will be installed at the ten (10’) feet setback from all drainage courses and wetlands.

McGehee Engineering — **Photographic Log**

Client Name:	**Site Location:** *Blue Creek Mine No. 1, R-9*
Warrior Met Coal BC	
Date:	*11-1-2023*
Photo No.	*6017*
Point No.	*NA*

Description:

Photo 6017 depicts bed, bank and ordinary high-water mark of drainage coarse north of Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	**Site Location:** *Blue Creek Mine No. 1, R-9*
Warrior Met Coal BC	
Date:	*11-1-2023*
Photo No.	*6018*
Point No.	*NA*

Description:

Photo 6018 depicts bed, bank and ordinary high-water mark of drainage coarse north of Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	Site Location:	Blue Creek Mine No. 1, R-9
Warrior Met Coal BC		
Date:	*11-1-2023*	
Photo No.	*6019*	
Point No.	*NA*	

Description:

Photo 6019 depicts bed, bank and ordinary high-water mark of drainage coarse north of Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	Site Location:	Blue Creek Mine No. 1, R-9
Warrior Met Coal BC		
Date:	*11-1-2023*	
Photo No.	*6018*	
Point No.	*NA*	

Description:

Photo 6020 depicts bed, bank and ordinary high-water mark of drainage coarse north of Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	**Site Location:** *Blue Creek Mine No. 1, R-9*
Warrior Met Coal BC	
Date:	*11-1-2023*
Photo No.	*6021*
Point No.	*NA*

Description:

Photo 6021 depicts bed, bank and ordinary high-water mark of drainage coarse north of Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	**Site Location:** *Blue Creek Mine No. 1, R-9*
Warrior Met Coal BC	
Date:	*11-1-2023*
Photo No.	*6022*
Point No.	*NA*

Description:

Photo 6022 depicts upstream view of drainage culvert underneath Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	**Site Location:** *Blue Creek Mine No. 1, R-9*
Warrior Met Coal BC	
Date:	*11-1-2023*
Photo No.	*6023*
Point No.	*NA*

Description:

Photo 6023 depicts downstream view of drainage culvert underneath Earnest Road and bed, bank and ordinary high-water mark of drainage coarse south of Earnest Road.

McGehee Engineering — **Photographic Log**

Client Name:	**Site Location:** *Blue Creek Mine No. 1, R-9*
Warrior Met Coal BC	
Date:	*11-1-2023*
Photo No.	*6024*
Point No.	*NA*

Description:

Photo 6024 depicts downstream view of drainage culvert underneath Earnest Road.

3. Diversions [780.29, 816.43, 816.44]

Are diversions of overflow or stream channel diversions proposed?

(XX) Yes ( ) No

If yes, complete the following:

(a) Is the diversion to be permanent? ( ) Yes (XX) No

(b) Describe in detail the proposed diversion and include plans, maps and cross-sections that comply with 816.43 and 816.44.

The only diversions proposed within this facility will be road side ditches that are built to protect the ancillary road ways. See Road Map found in Part III-B-5 of this application.

(c) If diversions are temporary, enclose plans for removal including a timetable and plans for restoration of vegetation, channel characteristics, etc.

See Part III-B-5

(d) Enclose approvals of other governmental agencies where required.

Not Required

4. Disposal of excess spoil. (780.35, 816.71)

Are excess spoil fills proposed?

( ) Yes. (XX) No.

If yes, complete the following:

(a) Show on a map the location of all proposed fills and provide cross-sections of the proposed site and design of the disposal site.

(b) Include the results of the geotechnical investigation showing:

(1) A description of physical characteristics of bedrock and geologic conditions in the disposal area; and

(2) A determination of possible adverse affects from subsidence due to past, present or future underground mining.

(3) Location of springs, seeps or other ground water observed or anticipated in the disposal area;

(4) A technical description of the rock to be used in construction of rock chimney sores or rock drainage blankets, if applicable;

(5) Results of stability analyses including strength parameters, pore pressures and long-term seepage conditions; and

(6) Engineering design assumptions, calculations, and any alternatives considered.

(c) Describe the construction, operation, maintenance and removal (if applicable) of the structure.

(d) Include a surface water drainage and control plan for the fill.

(e) Are rock-toe buttresses or keyway cuts to be used?

( ) Yes (XX) No

If yes, describe or show:

(1) The number, location and depth of test borings or test pits used in describing subsurface conditions; and

(2) Engineering specifications used in the design.

5. Transportation Facilities (780.33, 780.37)

See **Road Map**. With the construction of the beltline to transport coal from the P-3964 permit to the proposed rail loading facility (P-4003), numerous ancillary roads will be constructed. These ancillary roads will be used during the construction phase of the beltline, and the maintenance and service of the beltline during the life of the P-3964 permit. The ancillary roads will be constructed in the proposed locations seen on the **Permit Map** and **Road Map**. The layout and location of the ancillary roads will match, as close as possible, the existing terrain with minimal grade work needed. With this approach, all efforts will be made to reach a cut/fill balance to eliminate any excess material. Each proposed ancillary road location will be cleared and graded as necessary. All necessary BMPs will be implemented during the construction of the ancillary roads to control any runoff from any disturbance. Any needed BMPs for maintenance operations during the lifetime of the use of the ancillary roads will be implemented.

(a) Describe the measures to be taken to ensure the interest of the public and landowners affected are protected if disturbance within 100 feet of the right-of-way or relocation of a public road is proposed.

(1) Appropriate warning signs will be posted along the road right-of-way a minimum of five (500') hundred feet from the entrance of the proposed disturbance.

(2) Appropriate advertisements, informing the public and affected landowners, will be run in the local newspaper prior to any disturbance within the one hundred (100') feet setback of or the relocation of any public road right-of-way.

(3) All safety requirements of the appropriate Federal, State, County, or Local governments, concerning public health and safety, will be followed.

(4) In areas where disturbance is proposed within one hundred (100') feet of the road right-of-way, earthen berms, guard rails, or barricades will be constructed as necessary to prevent accidental entrance into the mine area and to prevent safety hazards.

(b) Describe any unique design, feature, or structure which is necessary for the road to meet the performance standards of Subchapter K using any necessary maps, plans, or cross-sections.

Describe, in detail, the measures to be taken during construction, maintenance and use of the transportation facilities to prevent damage to fish and wildlife and their habitat; public and private property; and erosion, siltation, and pollution of water.

Silt fences, hay filter dams, dust control on roads, vegetation, diversion ditches and other prudent practices will be utilized in controlling runoff. Cut and fill slopes created by road construction shall be grassed to ensure stabilization and prevent erosion.

DESIGN, CONSTRUCTION, MAINTENANCE, AND RECLAMATION SPECIFICATIONS FOR ANCILLARY ROADS

1. LOCATION

A) Ancillary roads will be located on ridges or high areas or on the most stable available slopes so as to control and prevent erosion, siltation, flooding, and adverse impacts to fish and wildlife, or their habitat and related environmental values, to the extent possible.

B) No part of any ancillary road will be located in the channel of an intermittent or perennial stream without written approval from the Regulatory Authority, in accordance with 880-X-10C-.12 thru 880-X-10C-.14 and 880-X-10C-.28.

C) If at all possible, ancillary roads will be located upstream of sediment basins to prevent, control and minimize additional contributions of suspended solids to stream flow or runoff outside the permit area, the violation of applicable State or Federal water quality standards, seriously altering the normal flow of water in stream-beds or drainage channels, and damage to all public or private property.

D) In instances where it is not possible to locate ancillary roads in the above manner, sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc.

2. DESIGN REQUIREMENTS

A) Ancillary roads will be designed, constructed, reconstructed and maintained to have adequate drainage control structures to safely pass the peak runoff anticipated from a 10 year, 6 hour precipitation event.

3. CONSTRUCTION REQUIREMENTS

A) The foundation area of the roadbed will be cleared and grubbed of all organic material and the topsoil will be removed. The disturbed area will be kept to the minimum necessary to accommodate the roadbed and/or associated drainage ditch construction.

B) The road construction material will be suitable subgrade material, free of sod, roots, stumps, etc., and will not contain rocks which exceed twelve (12) inches in diameter. The road construction material will be placed in layers (12-inch maximum thickness) and compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

C) The minimum top width of ancillary roads will under no circumstance be less than ten (10) feet and will be of maximum width necessary to facilitate the largest equipment using the road.

DESIGN, CONSTRUCTION, MAINTENANCE, AND RECLAMATION SPECIFICATIONS FOR ANCILLARY ROADS (Con't.)

D) Roadbeds for ancillary roads will be cut into consolidated, non-erodible material or will be surfaced with sufficiently durable, non-toxic, non-acid forming material as needed for the anticipated duration and frequency of use of the road. Because of the short-term duration and infrequency of use of most ancillary roads, sufficiently durable mine overburden material from the mine site will be used for surfacing material, placed and compacted on the roadbed surface a minimum depth of four (4) inches. In instances where ancillary roads are proposed for an extended duration or heavy usage is anticipated, then durable, non-toxic, non-acid forming material, such as chert, crushed limestone, redrock, and/or crushed sandstone will be placed and compacted on the roadbed surface a minimum depth of four (4) inches.

E) Ancillary roads will be constructed with no sustained grades of ten (10%) percent, unless unavoidable. If unavoidable, sediment control facilities such as silt fences, hay dams and/or rock check dams will be installed at strategic locations to prevent erosion and ensure stability. Grades greater than fifteen (15%) percent will require ditch relief drains, cross over drains and road drainways at a minimum of three hundred (300) feet apart.

4. DRAINAGE AND SEDIMENT CONTROL REQUIREMENTS

A) Ancillary roads will be constructed, reconstructed, and maintained to have adequate drainage control, using structures such as, but not limited to bridges, culverts, drainage pipes, ditches, cross drains, and ditch relief drains designed to safely pass the peak runoff anticipated from a 10 year, 6 hour precipitation event. All drainage control structures will be designed and constructed in such a manner whereas, to allow a free and operating conditions to prevent, control, and minimize erosion at the inlets and outlets.

B) Culverts and drainage pipes will be designed and installed to provide adequate support for the load of the largest equipment using the road. All culverts or drainage pipes with diameters of forty-eight (48) inches or less will be covered with a minimum of one (1) foot and the maximum cover will not exceed fifty-seven (57) feet of desirable compacted material. All culverts or drainage pipes with diameters greater than forty-eight (48) inches will be covered with a minimum of two (2) feet and the maximum cover will not exceed forty-one (41) feet of desirable compacted material.

C) Culverts and drainage pipes will be designed and installed to allow adequate freeboard to prevent overtopping of the embankment.

D) Drainage ditches, cross drains, and ditch relief drains will be constructed and maintained, as needed, to prevent uncontrolled surface drainage over the road surface and roadway embankment.

E) Drainage ditches will be constructed with no sustained grades greater than five (5%) percent, unless unavoidable. If ditches must be constructed with grades in excess of five (5%) percent, drainage ditches will be lined with suitable liner material, such as, riprap, concrete, asphalt or durable rock, to prevent erosion and ensure stabilization.

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F) Sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc. in strategic locations, where necessary.

G) Upon completion of construction of ancillary roads, the side slopes of the roadway cut and fill sections, including all borrow areas formed in the construction, areas used for disposal of excess material, ditches, etc. will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure restabilization. Grass mixtures will include, but not be limited to, fescue, bermuda, rye grass, browntop millet, clover and sericea.

5. INSPECTION AND MAINTENANCE REQUIREMENTS

A) Routine inspections and maintenance (such as regrading, resurfacing, maintenance of sediment control structures, spot replanting, and dust control) will be conducted regularly during the life of each road to ensure that each road continually meets design and performance standards.

B) Dust control will be achieved by the periodic application of water, chemical binders and/or other dust suppressants.

C) Any road damaged by a catastrophic event, such as a flood, or earthquake, will be repaired as soon as is practicable after the damage has occurred.

6. REMOVAL AND RECLAMATION REQUIREMENTS

A) All roads not to be retained under an approved postmining land use will be removed and reclaimed in accordance with the approved grading and reclamation plans as soon as practicable after it is no longer needed for mining and reclamation purposes. This removal and reclamation will include:

1. Closing the road to traffic;

2. Removing all bridges, culverts, drainage pipes, and other drainage control structures, unless otherwise approved as part of the postmining land use;

3. Removing and/or otherwise disposing of road surfacing materials, that are not compatible with the postmining land use and revegetation requirements, onsite or removed and stored for re-use;

4. Reshaping and regrading cut and fill slopes as necessary to be compatible with the postmining land use and to compliment the natural drainage pattern of the surrounding terrain;

5. Protecting the natural drainage patterns by installing dikes or cross drains as necessary to control surface runoff and erosion;

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6. Scarifying or ripping the roadbed, replacing topsoil or substitute material, and revegetating the entire disturbed area in accordance with the approved reclamation plan.

7. TYPICAL ROADBED CONFIGURATION

A) See attached **typical ancillary road drawing** for an illustration of the typical roadbed configurations.