

**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION
 USE ON REVIEW REPORT**

▶ **FILE #:** 5-A-18-UR **AGENDA ITEM #:** 50
 POSTPONEMENT(S): 5/10/2018 **AGENDA DATE:** 6/14/2018
 ▶ **APPLICANT:** BLUE WATER INDUSTRIES, LLC
 OWNER(S): Blue Water Industries

TAX ID NUMBER: 97 063, 064, 071, 072, 073 074 [View map on KGIS](#)
 JURISDICTION: County Commission District 8
 STREET ADDRESS:

▶ **LOCATION:** South side of Thorn Grove Pike, west side of Fawver Ln.
 ▶ **APPX. SIZE OF TRACT:** 25.8 acres
 SECTOR PLAN: East County
 GROWTH POLICY PLAN: Planned Growth Area & Rural
 ACCESSIBILITY: Access is via E. Governor John Sevier Highway, a three lane major arterial street with 50' of pavement width within a 115' right-of-way.
 UTILITIES: Water Source: Knoxville Utilities Board
 Sewer Source: Knoxville Utilities Board
 WATERSHED: Holston and French Broad

▶ **ZONING:** A (Agricultural), I (Industrial) & F (Floodway)
 ▶ **EXISTING LAND USE:** Rural Residential & Vacant
 ▶ **PROPOSED USE:** Expansion of existing Mining and Mineral Extraction operation

HISTORY OF ZONING: None noted.
 SURROUNDING LAND USE AND ZONING: North: Single family & rural residential, Thorn Grove Pike / A (Agricultural)
 South: French Broad River / F (Floodway)
 East: Single family & rural residential / A (Agricultural)
 West: Governor John Sevier Hwy, Quarry / I (Industrial)

NEIGHBORHOOD CONTEXT:

STAFF RECOMMENDATION:

▶ **APPROVE the request of 'Phase 1' only for expansion of the existing surface mining and mineral extraction operation as shown on the development plan and described in the Mining Plan of Operations (Amendment 1), subject to 15 conditions.**

1. Phase 2 of the future mining area, located on CLT Map 097, Parcels 071, 072, 073 & 074, shall not be considered for approval by the Planning Commission until the revegetation plan has been completed according to Attachment A (Mine Plan of Operations Revegetation Plan) of the Mining Plan of Operations (Amendment 1). This includes revegetating the external banks of the rock overburden berms along roadways, proposed landscaping at the intersection of E. Governor John Sevier Hwy and Asbury Rd. (see Attachment A), and all landscape screening required by Article 4, Section 4.10.11 (see Exhibit B for screening guideline).
2. Phase 1, 2, & 3 rock overburden berms can be created as part of the Phase 1 mining expansion but shall

- only be allowed after the required landscape screening of Article 4, Section 4.10.11 is installed. All berms shall be in conformance with the requirements of Article 4, Section 4.50 and the conditions of this use-on-review.
3. No landscape screening required by Article 4, Section 4.10.11 shall be removed unless replaced in-kind or to otherwise meet these screening standards. The placement of the landscape screening and rock berms should take into account any potential utilities and access that may need to be provided around the external boundary of the property so the screening does not need to be disturbed.
 4. Meeting the required 100-foot setback for the deposition of overburden or spoil bank (rock berm), or stockpile in the A (Agricultural) zone, and obtaining approval from the Board of Zoning Appeals to reduce this setback for the existing rock berms along E. Governor John Sevier Hwy., Asbury Rd., and Thorn Grove Pike to no less than the existing condition.
 5. No new or existing berm shall exceed the building height restrictions of the State of Tennessee Scenic Highway System Act of 1971 (TCA 54-17-115) as measured from E. Governor John Sevier Hwy. Existing berms that exceed this height restriction may remain at the height shown on the 'Plan of Operations Map North' (Drawing Date: 2/14/2018, Revised: 4/20/2018) but cannot be increased in height. TCA 54-17-115 is attached as Exhibit A.
 6. No new berm shall exceed 35 feet in height within 500 feet of a residential dwelling, with exception of the Phase 1 berm at the corner of Thorn Grove Pike and Burkbrooks Ln. shall be allowed to taper the height from the existing berm so long as the berm does not exceed 35 feet in height within 150 feet of Burkbrooks Ln.
 7. Meeting all of the performance standards as contained in Article 4, Section 4.10 and Section 4.50 of the Knox County Zoning Ordinance.
 8. Meeting all other applicable requirements of the Knox County Zoning Ordinance.
 9. Meeting all requirements of the Knox County Health Department.
 10. Meeting all requirements of the Knox County Department of Engineering and Public Works.
 11. Meeting all applicable requirements and obtaining all required permits dealing with water and air quality from the appropriate governmental agency.
 12. All traffic involved in the sales and distribution of the stone produced on this site will be limited to using the existing driveways on the west side of E. Gov. John Sevier Hwy.
 13. Posting of the required bond with Knox County or the State of Tennessee.
 14. A revised site plan reflecting the conditions of approval must be submitted to MPC staff prior to issuance of grading permits.
 15. Approval of this application by the Knox County Board of Commissioners.

COMMENTS:

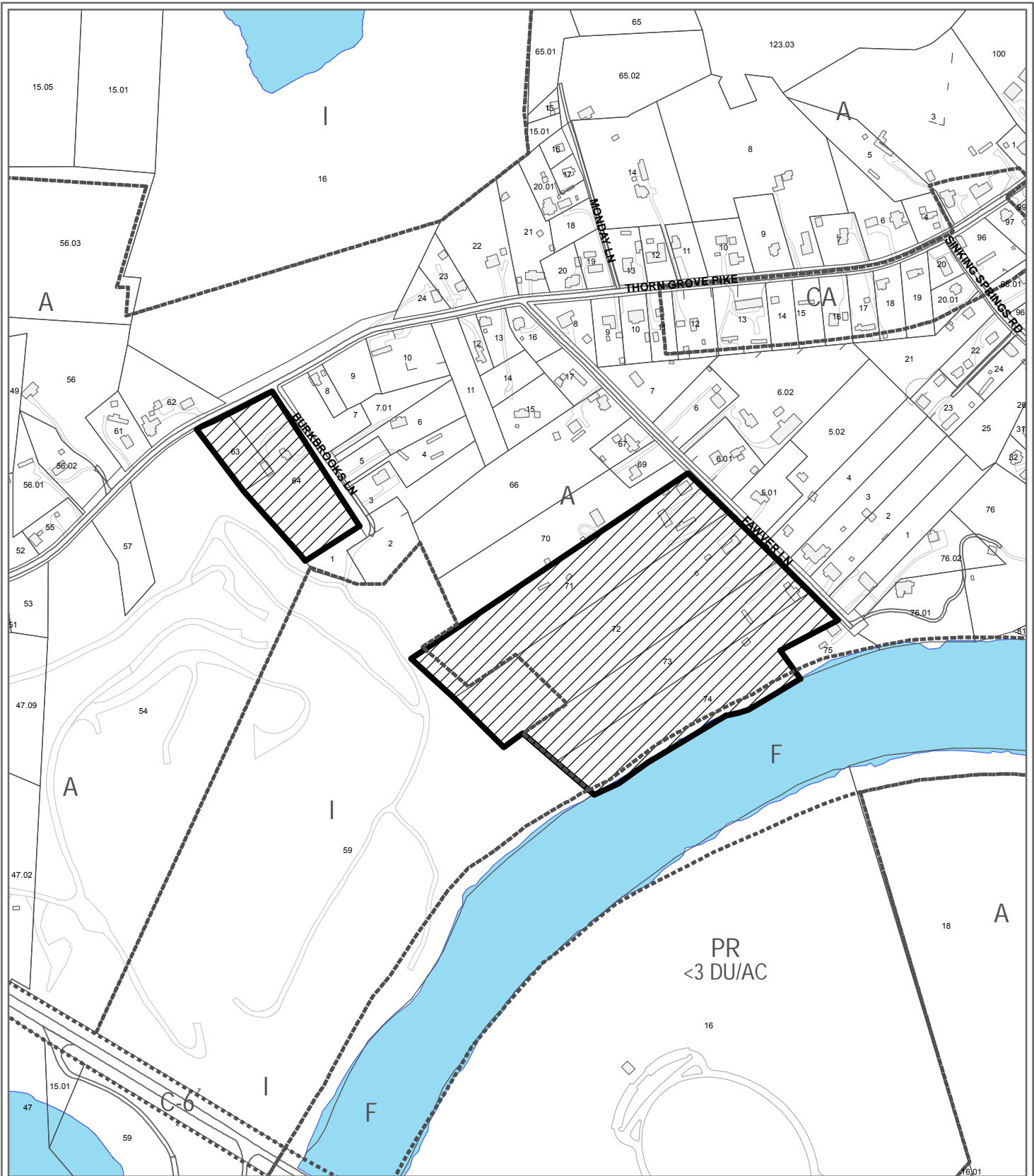
This proposal is to expand the existing Blue Water Industries (formally Aggregates USA, LLC) quarry operation by approximately 25.8 acres by extending the quarry operations to Fawver Ln. to the east and Burkbrooks Ln. to the northeast. If approved, the quarry site will have a total permit area of 325 acres. Staff is only recommending approval of the Phase 1 mining expansion until the revegetation of the rock berms is complete. Once the rock berms are revegetated, the Planning Commission may consider a new application for expansion of the mining operations.

Additional comments regarding the proposal and staff recommendations will be provided before the MPC Agenda Review meeting on June 12th.

ESTIMATED TRAFFIC IMPACT: Not required.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



**5-A-18-UR
USE ON REVIEW**

Petitioner: Blue Water Industries, LLC



Expansion of existing Mining and Mineral Extraction operation in A (Agricultural), I (Industrial) & F (Floodway)

Map No: 97

Jurisdiction: County

Original Print Date: 4/16/2018

Revised:

Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902





MERIDIAN BASIS:
TN STATE PLANE
NAD 83



LEGEND

- NPDES Permit Area
- Site Property Line
- Blue Water Industries Parcels Proposed for Addition to Plan of Operation
- Adjoining Parcels by Others
- 100 Foot Setback Line
- 200 Foot Setback Line
- I** Phase I Berms
- II** Phase II Berms
- III** Phase II Berms
- Future Berms (Overburden used in Site Berms)
- Existing Berms (Current Overburden Storage)
- Existing Mining Area
- Future Mining Area (Phase I Next 5 Years) (Phase II Next 5-10 Years)

PLAN OF OPERATIONS MAP NORTH



BLUE WATER INDUSTRIES
BWI FORKS OF THE RIVER, LLC – QUARRY
LAT. 35-57-6.6N AND LONG. 83-48-56.1W
KNOX COUNTY, TENNESSEE

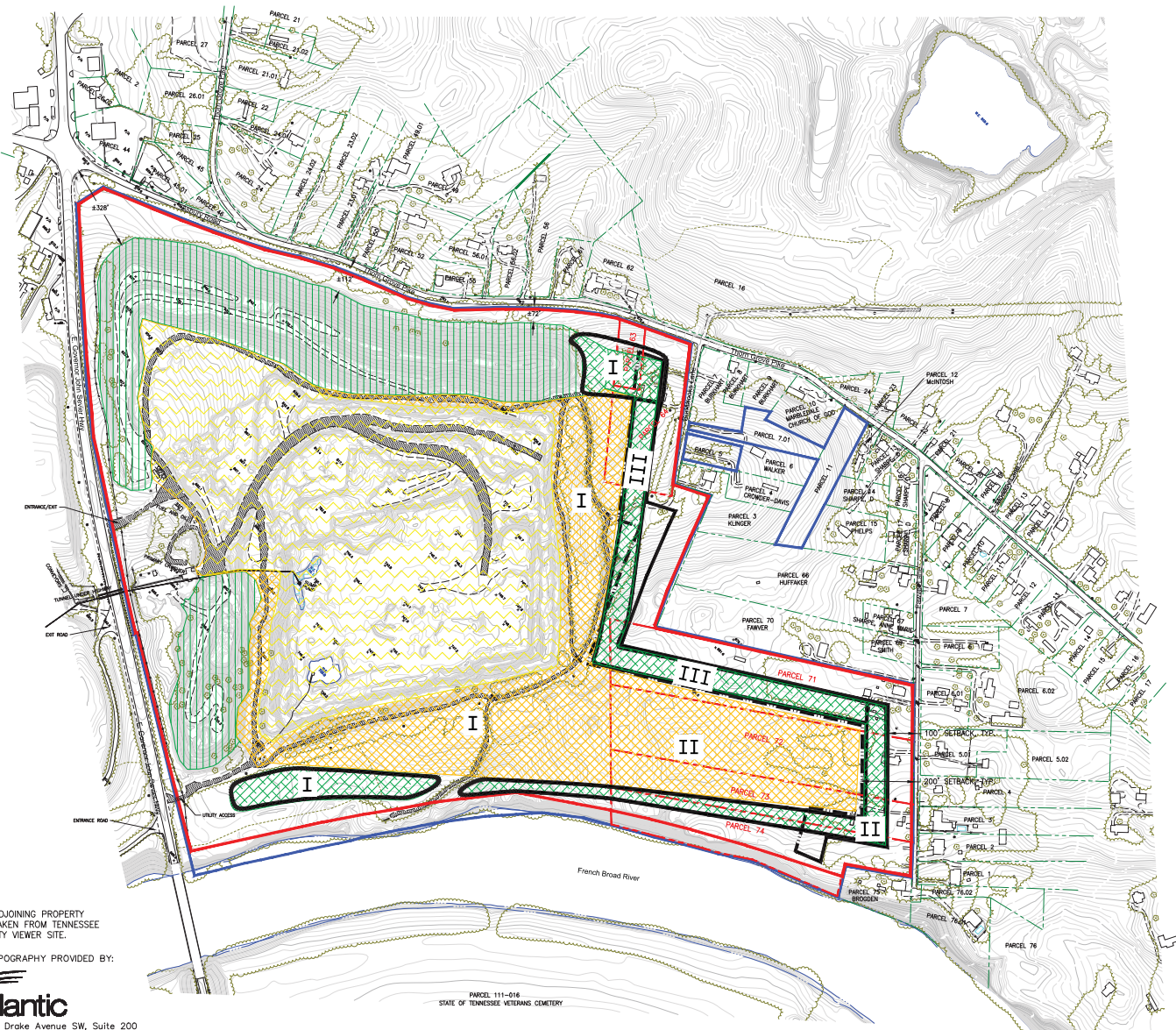
Revised: April 20, 2018
Drawing Date: February 14, 2018

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P.O. BOX 2968, MURFREESBORO, TN 37133-2968
(615) 895-8221 • FAX (615) 895-0632

FILE NAME: L: \Enviro\Active\963-15\Drawings for Knoxville 2018\Plan of Operations Map North.dwg



NOTE: ADJOINING PROPERTY LINES TAKEN FROM TENNESSEE PROPERTY VIEWER SITE.
SITE TOPOGRAPHY PROVIDED BY:
 atlantic
2223 Drake Avenue SW, Suite 200
Huntsville, AL 35805
P: 256.971.9991 F: 256.971.1154

PARCEL 111-016
STATE OF TENNESSEE VETERANS CEMETERY

Revised: 4/25/2018

Title 54: Highways, Bridges and Ferries

Chapter 17: Scenic Roadways

Part 1: Scenic Highway System Act of 1971

TCA 54-17-115: Building restrictions near scenic highways.

(a) (1) The exposed portion of buildings constructed or erected on property located within one thousand feet (1,000¢) of a scenic highway shall not exceed a height of thirty-five feet (35¢) above the level of the highway on property located below the level of the highway, or a height of thirty-five feet (35¢) above the ground line on property located above the level of the highway.

(2) The restriction on buildings shall apply to the scenic highway, notwithstanding the route being located inside or outside a municipality and notwithstanding any law or ordinance to the contrary.

(b) It is the legislative intent of this section, in part, that possession of a building permit at the time a road or highway is designated a scenic highway shall not allow any future construction based on that permit.

(c) (1) This section shall not apply to any building in existence at the time a road or highway is designated a part of the system.

(2) Silos and buildings designed for agricultural use are exempted from the application of this section.

(3) Any geographic area designated by state law and managed by a development authority authorized to promote and regulate technology-based economic development is exempt from the application of this section.

(4) Section 54-17-113 shall not apply to this section.

History: [Acts 1972, ch. 685, § 1; 1973, ch. 9, § 4; 1976, ch. 819, § 10; modified; T.C.A., § 54-2515; Acts 1987, ch. 30, § 1; 1990, ch. 660, § 1.]

GUIDELINES LANDSCAPE SCREENING

DESIGN

Type "A" Screen: Dense

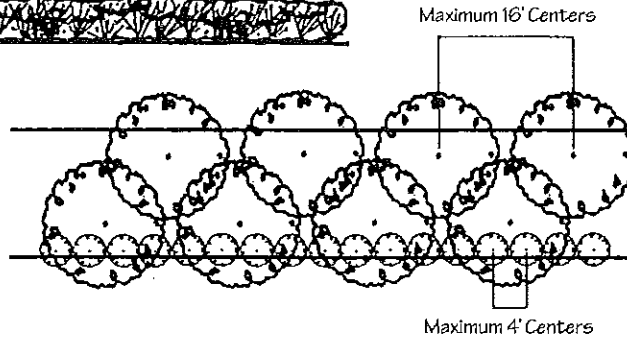
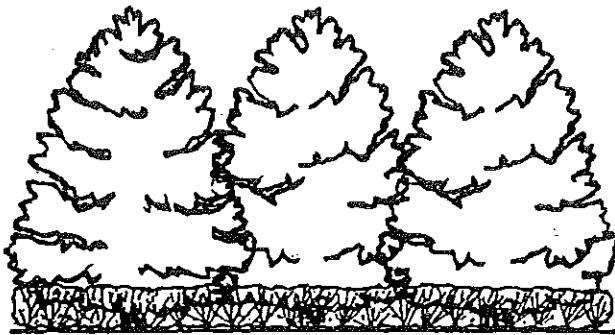
APPROPRIATE LOCATION: Boundaries of commercial and industrial developments adjoining residential areas

NOTE: Landscape buffer strips should be a minimum of 15 feet in width, and sown with grass or ground cover for their full width, allowing for mulch at the base of plantings.

- Two offset rows of deciduous or evergreen canopy trees with a 6 ft. high continuous dense evergreen hedge, fence, wall or earth berm

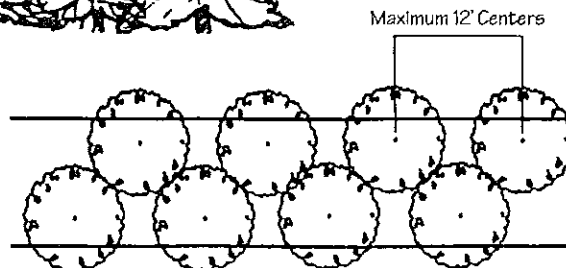
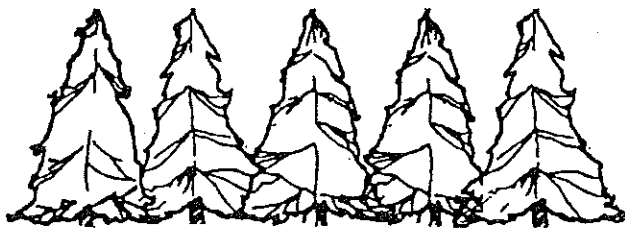
TREE HEIGHT
Installed: 8 ft.
Mature: 40 ft.

SHRUB HEIGHT
Installed: 4 ft.
Mature: 6 ft.



- Two offset rows of evergreen trees with branches touching the ground

TREE HEIGHT
Installed: 8 ft.
Mature: 30 ft.



INTRODUCTION

Landscape screening reduces the impact of intense development upon adjacent land uses by providing visual separation, reducing the transmission of glare and air pollution, and limiting access. Screening also promotes the aesthetic appeal of a neighborhood and promotes higher property values.

This series of design guidelines defines several types of landscape screen. Each type is applicable to a certain intensity of conflict between adjacent land uses. Each screen type is illustrated by several planting schemes with an equivalent height, density and opacity of landscaping.

MPC uses these guidelines to illustrate desirable levels of screening appropriate to various site planning situations. Creative alternatives which achieve a comparable effect are encouraged.

For more information:

MPC
Development Services
Suite 403
City County Building
400 Main Street
Knoxville, TN 37902
Phone: 865 215-2500
Fax: 865 215-2068
Web: www.knoxmpc.org

The contents of these guidelines are advisory and are intended to supplement, but not replace, the requirements of the Knoxville Zoning Ordinance and the Knox County Zoning Ordinance.



BLUE WATER
I N D U S T R I E S

MINING PLAN OF OPERATIONS (Amendment I)

BWI Forks of The River, LLC - Quarry

2303 E. Governor John Sevier Highway
Knoxville, Tennessee 37914

Date:

Original Submittal: 3/20/2018

Revised Submittal Per MPC Staff Comments: 4/24/2018

5-A-18-UR

Revised: 5/23/2018

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(Amendment I 3-20-2018, Revised 4-24-2018)
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- Section 3: Plan of Operations Map North, Property Map
North, and Property 2016 Aerial Photograph
(Amendment I 3-20-2018, Revised 4-24-2018)

Section 1
Mine Plan of Operations Introduction
(Amendment I 3-20-2018, Revised 4-24-2018)

**Proposed Expansion of Existing Approved and Permitted
Rock Quarry by Blue Water Industries located at
2303 E. Governor John Sevier Highway
Knoxville, Tennessee 37914**

INTRODUCTION

Company Information

Blue Water Industries (BWI) has a principal address of West Palm Beach, Florida with its BWI ETN LLC office located at 9509 Diggs Gap Road, Heiskell, Knox County, Tennessee 37754. BWI owns and operates stone quarries and sales yards in Tennessee, Virginia, Alabama, and Florida. In Knox County, Tennessee Aggregates USA, LLC owns and operates the I-75, Forks of the River, and Midway Quarries along with the Coster Sales Yard. The BWI facilities in Knox County were most recently owned by Aggregates USA, LLC, Rinker Materials Inc., and prior to that American Limestone Company. BWI employees over 375 personnel with over 45 of them assigned to facilities in Knox County of which approximately 12 are assigned to the BWI Forks of the River, LLC Quarry.

The Industry

The quarrying industry is a unique and necessary industry dating back to the beginnings of civilization. Materials from quarrying are used in everything from construction of homes, churches, schools, railroads, roads, and bridges to our national/state security infrastructure, government buildings, monuments and cemeteries. The industry has advanced through history to the modern processes taking advantage of new technology to reduce energy use, labor saving automation, increased safety, and greater environmental responsibility to produce a vital product for our society. Modern Americans use as much as 20 tons of mineral products and fuels per person per year. Of these 20 tons, as much as 12 tons per year are crushed stone and sand. Crushed stone goes into a variety of products everyone uses daily although they may not realize it. Concrete in sidewalks, roadways, bridges, walls, floors, and foundations contains 80% crushed stone. Asphalt pavement contains as much as 94% crushed stone and sand aggregates. Crushed stone also goes into: gravel roads and lanes, the base

for roadways, foundations, bedding stone for pipelines, rip rap for erosion control, stone for bank stabilization, filter media in water treatment plants, fillers in paper and plastics, concrete block, glass and fiberglass making, agricultural lime, chemical manufacture, cement making, and many other uses.

The crushed stone industry is very sensitive to location both from a geologic condition and customer focus. Crushed stone is one of the lowest priced basic commodities. Its price and market area is sensitive to transportation distances. It is important to locate quarries as close to the market area as possible to keep costs to the consumer as low as possible. Truck transportation is the only logical method to transport crushed stone in the Knox County market. Location of a quarry close to major highways and interstates is essential to maximize ease of product distribution and keep traffic patterns from affecting sensitive areas such as residential and high density commercial business areas.

Rock quarrying is a long-term proposition. Gone are the days when a quarry was opened for a short-term project such as a specific stretch of interstate or highway and then abandoned. Emphasis is now on locating sites where a quarry can be developed which will serve the community for an extended time period (50 plus years). This allows for stability of traffic patterns and surrounding development and also allows the quarry operator the time to establish an operation that will be operated in the most efficient manner possible. Upon completion of mining there are many options for reuse/reclamation of quarries. Previously quarried properties have become parks or greenways with hiking/biking/walking trails, nature centers for education and conservation, subdivision sites, golf courses, business complexes, freshwater reservoirs for public water supply, and storm water detention areas for municipalities. Reclamation of this site would be amenable to the creation of a park/greenway (e.g. Mead's Quarry at Ijams Nature Center and the old Vulcan City Quarry at Fort Dickerson Park), business complex, industrial facility with the requirement for a clean fresh water source, or freshwater storage reservoir for an East Knox County potable water users.

Knox County

Knox County is continuing to experience steady growth. One Sector experiencing this growth is the East County Area from Exit 398 on Interstate 40 at Strawberry Plains Pike up to and beyond Exit 402 at Midway. The area along Governor John Sevier Highway (TN 168) from Asheville Highway (U.S. 25W/70) to Alcoa Highway (U.S. 129/TN 115) continues to grow as well. The facility most central and easily accessed via the current road system, which leads to being the most economical source of crushed stone in Knox County to provide materials for development in this area is the Forks of the River Quarry. Other sources of stone that could possibly supply this area for development are located in areas with less developed transportation infrastructure, closer to residential and/or downtown business development, or originate outside of the county. Crushed stone is sensitive to location, as price for the product increases with increasing distance from the source. This results in situations where it isn't uncommon for the transportation costs to exceed the value of the stone. Not having a high quality source of stone close to the market results in an economic disadvantage for citizens, developers, and Knox County as a whole. Crushed stone operations are also restricted to where quality stone exists. While there are abundant rock outcroppings in Knox County, quantities of quality stone in sufficient volume for quarrying in areas with well-developed transportation infrastructure that are beneficial to residential and business developments are uncommon.

It was the presence of quality stone, in a growing part of the county with a well-developed and further developing infrastructure, that caused American Limestone Company (ALC) and Rinker Materials Inc. (RMC), the predecessors to Blue Water Industries to acquire, zone, and permit the properties that currently make up the BWI Forks of the River Quarry (Forks) operation. It is also in an area that has known mining in some form since the late 1800's. Dimension Stone quarrying of the Holston marbles, a lime kiln, and aggregate operations have been a part of this community for over a hundred years. BWI believes this is a good location to invest in Knox County by continuing to develop the existing quarry to serve the long term needs of Knox County, as well as parts of Sevier and Blount counties.

Location

The quarry's physical address is 2303 E. Governor John Sevier Highway, Knoxville, Tennessee 37914 and the approximate geographic center of the entire quarry site is latitude 35°57'-18" N and longitude 83°-48'-48" W. The currently permitted and approved properties at Forks were originally acquired by ALC and RMC stretching from South National Drive between Asbury Road and the French Broad River across John Sevier Highway up Thorn Grove Pike to Fawver Lane.

Present land zoning is mixed within the quarry operation and within one mile of the boundary of the quarry. Quarry property located south of E. Governor John Sevier Highway (Highway) is mixed zoned Industrial (I), Agricultural (A), and General Business Zone (CA). Quarry property north of Highway is mixed zoned Business and Manufacturing Zone (CB), I, and A. To the north of the quarry there is A, I, and CA, to the east PR (Veteran's Cemetery) and A, to the south PR, I, A, and to the west I, LI, A, OB, CA, and CB. The area around the quarry is heavily industrialized and the quarry is depicted in the Forks of the River Industrial Park Spring 2016 Aerial Photograph. Similar and related business industries within the area are the East Tennessee Industries Inc. quarry properties along Asbury Road and Thorn Grove Pike, Burkhart Enterprises Aggregate Terminal on Asbury Road, Duracap Asphalt on Asbury Road, and Harrison Construction Company Asphalt Plant on Cinder Lane.

Quarry Access

Access to the quarry is via a paved, private, one-way entrance driveway located at 2303 E. Governor John Sevier Highway approximately 175' from the Doctor J.H. Gammon Bridge over the French Broad River. Traffic exiting the quarry leaves via a paved, private, one-way exit driveway located approximately 800' northwest of the entrance driveway. Material delivery dump trucks are used to transport crushed stone products to customers. Governor John Sevier Highway is a state numbered highway - Tennessee Highway 168, which has been improved in the area of the entrance by widening with a center turn lane. Truck traffic travels on Governor John Sevier Highway to major arterial roads such as Asheville Highway, Thorn Grove Pike, Strawberry Plains Pike, Andrew Johnson Highway, Alcoa Highway,

Chapman Highway and I-40 towards final delivery sites. Truck traffic transporting stone products on Governor John Sevier Highway will be no greater than it is currently. This is because stone produced in the expanded pit will be moved through the existing tunnel under E. Governor John Sevier Highway by overland conveyor to the existing plant for final processing, and shipped out via the existing exit onto the highway.

A state highway department approved access point occurs on the eastern side of Governor John Sevier Highway. At this point, a small service road provides access to the current North Pit (Pit 3) for company vehicles such as pickup trucks and service vehicles, contractor vehicles, and to allow heavy quarry equipment to be transported in and out using low-boy type tractor trailer units. No heavy quarry equipment will be operated on Governor John Sevier Highway. The further development of Pit3 and use of existing facilities will not put any substantial additional traffic on main roads or residential streets, in conformance with Article 4, Supplementary Regulations, Section 2, 4.10.15.

Geomorphology and Geology

The proposed quarry site is characterized by low, rolling hills and shallow valleys and sinkholes. The area is dry on the surface, containing no surface streams. Storm water runoff sinks into the ground after flowing short distances and joins the area groundwater flow. This happens by flowing into small and large sinkholes in the area, and by percolation through the thin to moderate thickness residual soil blanket that has developed through the years. Geologically, the property is underlain by limestone and dolomite of Ordovician Age. The northern part of the site is underlain by dark, greenish-gray, shaley limestones of the Lenoir Formation. Much of the central portions of the site are underlain by limestones of the Mosheim member of the Lenoir. It is this formation that contains many of the sinkholes. The southern part of the property, from the vicinity of the K.U.B. power line to the French Broad River, is underlain by dolomites and thin limestones of the Mascot formation of the Knox Group. All of the rocks dip to the southeast at approximately 15° to 20°. Core drilling has shown that weathering has developed a 2-foot to 20-foot thick overburden of clay soil and occasional chert fragments. This

material must be removed before quarrying can begin. Core drilling has further confirmed the presence of limestone and dolomite which meets all state requirements for construction aggregates with the exception of skid resistance. This stone will be therefore acceptable for all uses except for skid resistant surfacing on high-traffic count roads.

Environmental, Safety, and Health Aspects

Safety and Health, drilling and blasting, air quality, water quality, solid waste management, noise, and aesthetics are addressed in the following subsections. BWI is acutely aware of the public's interest concerning these issues and it can and does successfully address and control these aspects of the operation.

(Safety and Health)

The quarry operates under the guidelines of the United States Department of Labor-Mine Safety and Health Administration (MSHA). Federal MSHA inspectors inspect the quarry a minimum of two (2) per fiscal year. MSHA requires all employs that participate in mining activities at the site to be trained miners. MSHA regulates and inspects aspects of the operation such as (noise and dust exposures, pit development, overburden removal/placement, plant and mobile equipment operation, petroleum management, employee training, general cleanliness, and other related items).

(Drilling and Blasting)

Drilling and blasting is the only efficient way to obtain rock from this type of deposit for making crushed stone aggregates. BWI contracts with licensed drillers, blasters, and seismic monitoring professionals to perform and monitor these activities at the quarry. Drilling is conducted by compressed air or hydraulic percussion drills on a precisely laid out pattern. This pattern of holes is designed to maximize breakage of the rock and minimize the amount of explosives used. The major type of explosives used in modern quarrying are ANFO, ANFO emulsions, or water gels. These explosives are brought to the site by a contractor, loaded into the holes following precise guidelines as to the amount of explosives that can be used, and detonated by a licensed blaster. The blasting

contractor and/or a separate seismic monitoring company monitor each blast and record seismograph readings. BWI operates two other quarries in Knox County and complies with the county, state, and federal performance standards related to these activities. The Tennessee State Fire Marshall's Office regulates such activities and periodically inspects the records for compliance that are required to be kept for three (3) years from the date the blast occurs. These activities are conducted in compliance with Knox County Ordinances Article 4, Section 1, 4.10.01, 4.10.03, and 4.10.07.

(Air Quality)

The emission of pollutants to the air in Knox County is regulated by the Knox County Department Air Quality Management (KCDAQM). Permits to construct and operate crushed stone processing equipment are obtained from the Department. Currently BWI maintains Air Quality Operating Permit No. 18-0092 from the Department to operate processing equipment at the quarry. Sources of dust at a quarry tend to be crushers, screens, certain stockpiles, and roadways. Emissions from these sources can generally be controlled by the application of water using spray nozzles at selected sites, and partial to complete enclosure of selected equipment. Dust from roadways can best be suppressed by use of a water truck to keep roadways wet and clear of buildup. These activities are conducted in compliance with Knox County Ordinances Article 4, Section 1, 4.10.08.

(Water Quality)

Sources of possible water pollutants at a quarry are generally from stormwater runoff, plant and equipment wash down water, pit pump-out, and plant process (stone wash water and dust suppression) water. Pollutants most likely to be found are suspended solids, oil and grease, and low or high pH levels. These and any other pollutants of interest potentially present in water at mining sites in Tennessee are regulated by the Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources - Surface Mining Section. Operation of a quarry requires the possession of an NPDES permit from TDEC. The most common method of water pollution control is the construction of sedimentation basins with controlled discharge points, water collection points and recycling through the process, best management practices, and diversion structures to prevent

water from becoming affected by contact with quarry operations. All of these techniques are used at the quarry. BWI maintains three (3) process water and one (1) storm water outfall via NPDES Permit No. TN0004987. These activities are conducted in compliance with Knox County Ordinances Article 4, Section 2, 4.50.02 B. (6.).

(Natural and Man Made Waste Materials)

Natural wastes generated at a quarry site tend to come from two areas dirt/low quality rock and vegetative debris associated with the removal of overburden or site preparation for other facilities. The initial overburden resulting from site development was used mainly in the construction of the fill for the plant and operating site and berms along the property edges. After that when possible overburden is sold as a fill product on construction projects with any excess overburden being placed in berms and storage areas on site. With the continued expansion of Pit3 at the quarry the overburden material will be used to extend the site perimeter berms. The management of these materials is regulated by TDEC-Division of Water Resources - Surface Mining Section via the NPDES Permit No. TN0004987.

Solid waste from daily operations include office materials, wood, empty containers, tires, used filters, used oil, batteries, spent solvent, scrap metal, used rubber belting, used tires, and decommissioned equipment. BWI follows a philosophy of reduce and recycle to minimize the generation of solid waste. Among the items recycled are batteries, used oil, used filters, used antifreeze, spent solvent, scrap metal, used rubber belting and tires. Items reused include used rubber belting for shorter belts and other uses, scrap metal, parts from decommissioned equipment, and recycled/refreshed solvents. Potential hazardous wastes are recycled when possible or properly managed as special or universal wastes. Hazardous waste generation at quarry sites is minimal and the site should qualify as a Conditionally Exempt Small Quantity Generator if necessary. Non-hazardous waste not sent for recycling or reuse will be placed in a dumpster provided by a commercial waste handler such as Waste Management for proper disposal in a landfill. The management of these wastes is regulated by the TDEC - Division of Solid Waste Management. These activities are conducted in compliance with Knox County Ordinances Article 4, Section 1, 4.10.06.

(Noise)

Noise at a quarry site comes from blasting and operation of mobile and stationary equipment. BWI complies with the Knox County noise level standards on and beyond the property boundaries as required by Article 4, Section 1, 4.10.01. The location of the primary crusher and quarry in a low area screens most neighbors. The use of operational noise reduction measures and the use of berms and vegetation for sight and sound barriers provide further protection.

Blasting provides the loudest source of noise however; the location and instantaneous nature of the blast will have no long-term effect. Blasting occurs normally once to twice a week during the busiest times and generally around the noon hour to midafternoon if possible. The short duration of the blast is within Knox County performance standard guidelines per Article 4, Section 1, 4.10.07 and BWI takes every step possible to minimize noise from this activity. As necessary seismographs with microphones will be used at selected sites to determine noise levels associated with blasting.

(Aesthetics)

Quarry Pit3 and the primary processing plant located inside it are shielded from the view of the majority of neighbors. To the east you have the tree line along the natural rock bluff on the French Broad River, to the north you have the natural tree lines in the 100' setback required by Article 4, Section 2, 4.50.02 (B) and future site berm, to the west you will have the continuation of the site berm along Thorn Grove Pike and to the south you have the berms along John Sevier Highway. Seeding of various grasses will be performed between the roads and the toe of the berms. Other re-vegetation work will be performed as required/allowed by TDOT and KUB in relation to their road and utility line right of ways. The only real visual break is at the tunnel under the highway that allows the movement of aggregate materials to the secondary processing plant and sales yard. Colored matting on the fence at this location will be implemented to decrease the visibility of the operations.

Summary

Blue Water Industries and its predecessors have operated quarries in Knox County, East and Middle Tennessee, Virginia, Alabama, and Florida, for many years with the Forks of the River Quarry being in operation for approximately forty-five (45) years. There is a long-term market need for quality crushed stone provided by the quarry to meet the needs of the growing East Knox County sector as well as the Sevier County and Blount County markets. The deposit of quality limestone of the Lenoir Formation and dolomitic limestone of the Knox Group located at the quarry can meet these needs well into the future.

**Section 2 Mine Plan of Operations
Sequence & Methods
(Amendment I 3-20-2018, Revised 4-24-2018)**

Mine Plan of Operations Sequence & Methods
BWI Forks of the River, LLC Quarry
2303 E. Governor John Sevier Highway

Site Facts

Blue Water Industries (BWI) currently owns approximately 338.5 acres and operates on approximately 280 acres that are permitted with the Tennessee Department of Environment and Conservation (TDEC) for quarrying activities, which are located on the north and south sides of E. Governor John Sevier Highway. An application has been submitted to TDEC to add the newly acquired acreage to the permit that would increase the total permit area to 325 acres. The six (6) new parcels being requested for Use on Review make up approximately 25.8 acres with the rest of the increase coming from previously permitted and approved land that was held out of the quarry's NPDES Permit because of a tenant asphalt plant that used to be located on the property.

Overburden Removal and Management

Overburden will be removed in phases as necessary to expand the current active quarry pit. As a result, the property site berms would be constructed concurrently with the overburden removal. The proposed Phase I overburden removal area consists of the area to the northwest towards Burkbrooks Lane and to the southeast along the highwall adjacent to the French Broad River. Phase I berm construction would consist of the continuation of the current berm along Thorn Grove Pike and the berm near the bridge over the French Broad River. BWI desires to continue the berms at their current configuration along Thorn Grove Pike, Burkbrooks Lane, and Fawver Lane. This will keep the structure and visual aspect of the berms uniform. The berms in their current structure serve several purposes. The berms act as a visual and audible barrier between the operations contained inside and the public located outside. The configuration of the berms act as a solid deterrent to trespassers. The berm along Thorn Grove Pike is continuous whereas the berm near the bridge has a break to allow access by utility companies, emergency personnel, and quarry employees as necessary to that portion of the property. Phase II of overburden removal would progress to the four (4) parcels of property with frontages along Fawver

Lane that run parallel to the river as you go upstream. The Phase II and III berm construction would consist of the areas around neighbors on Fawver Lane and Burkbrooks Lane. These activities will be conducted in compliance with Knox County Ordinances Article 4, Section 2, 4.50.02 B. (2. & 3.) unless otherwise approved.

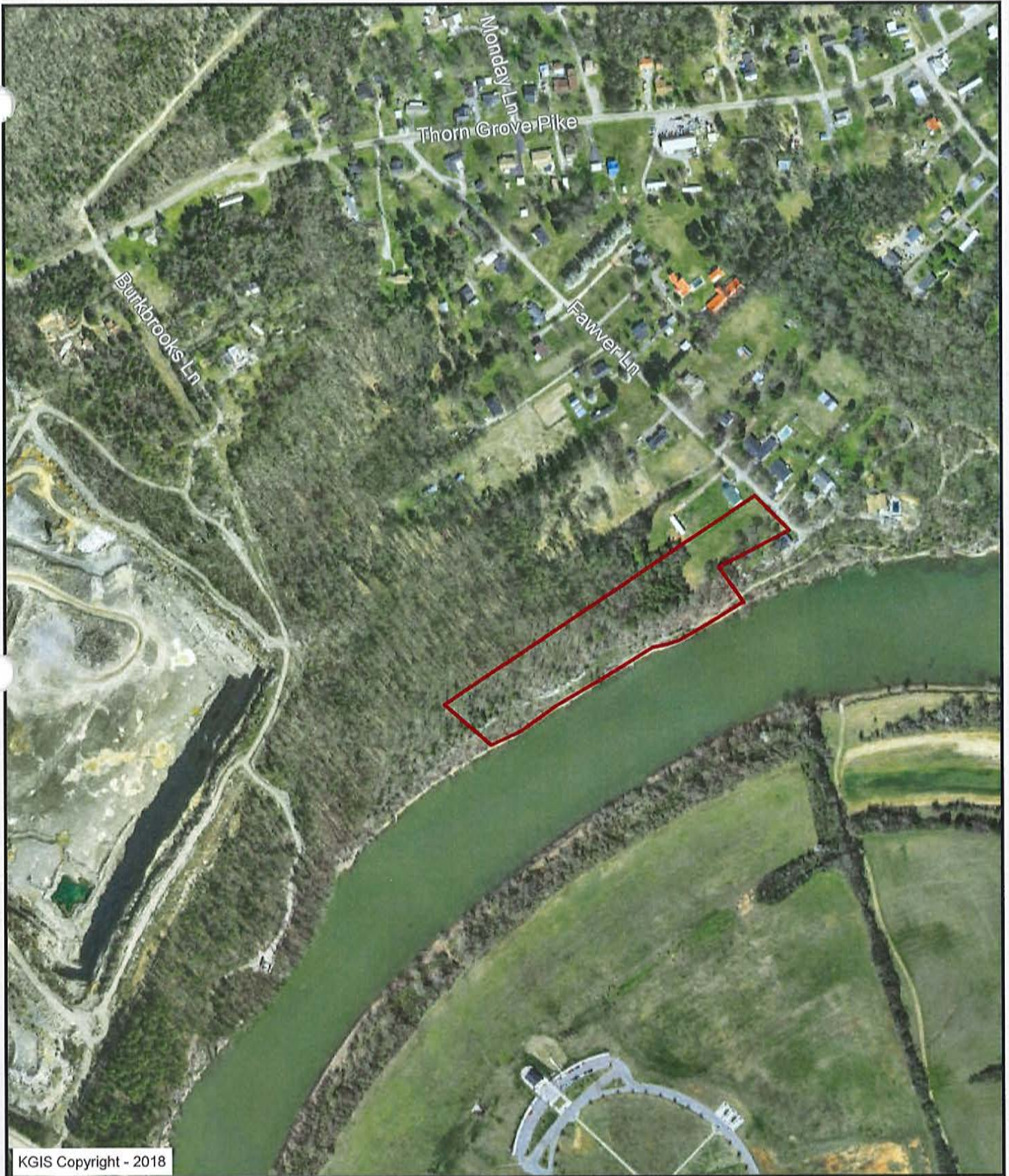
A request is being submitted with the UOR Application to continue the berm along Thorn Grove Pike and Burkbrooks Lane (Map 097 Parcels 63 and 64) within the 100' setback to coincide with the approval received by Rinker Materials in September 2003.

Pit Development

Phase I development of the pit will consist of extending the pit to the north/northwest towards Burkbrooks Lane and to the southeast towards the river. Phase II development of the pit will consist of extending the pit to the northeast parallel to the river in the direction of Fawver Lane. Once the pit is extended out horizontally we can then drive down in the floor and go deeper. These activities will be conducted in compliance with Knox County Ordinances Article 4, Section 2, 4.50.02 B. (2. & 3.) unless otherwise approved.

Section 3

**Plan of Operations Map North, Property Map North,
and Property 2016 Aerial Photograph
(Amendment I 3-20-2018, Revised 4-24-2018)**



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BWI Forks of The River, LLC Quarry

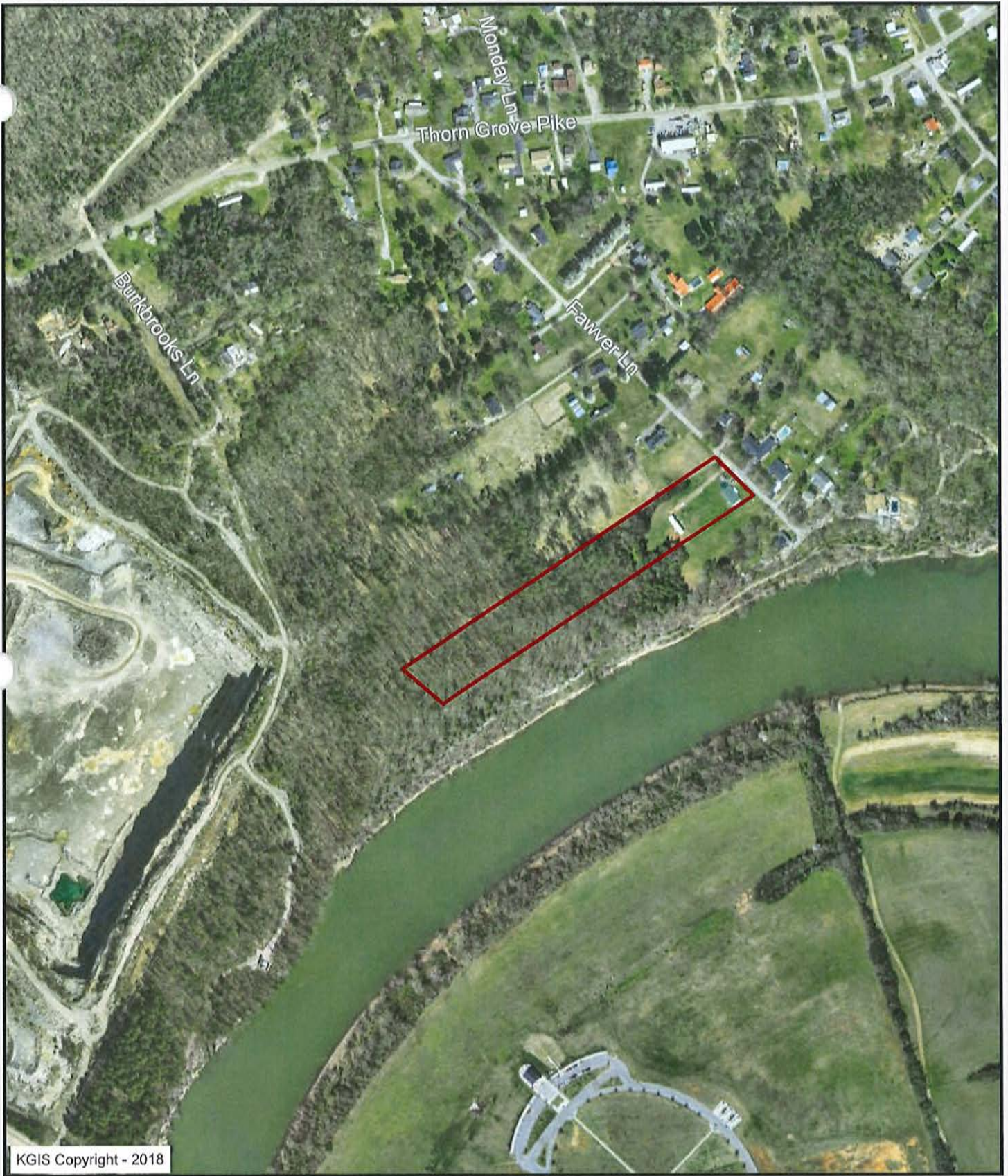
2947 B Fawver Ln
Parcel ID 097-074, Acres 3.72

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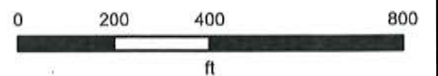
BWI Forks of The River, LLC Quarry

2943 Fawver Ln

Parcel ID 097-073, Acres 4.17

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BWI Forks of The River, LLC Quarry

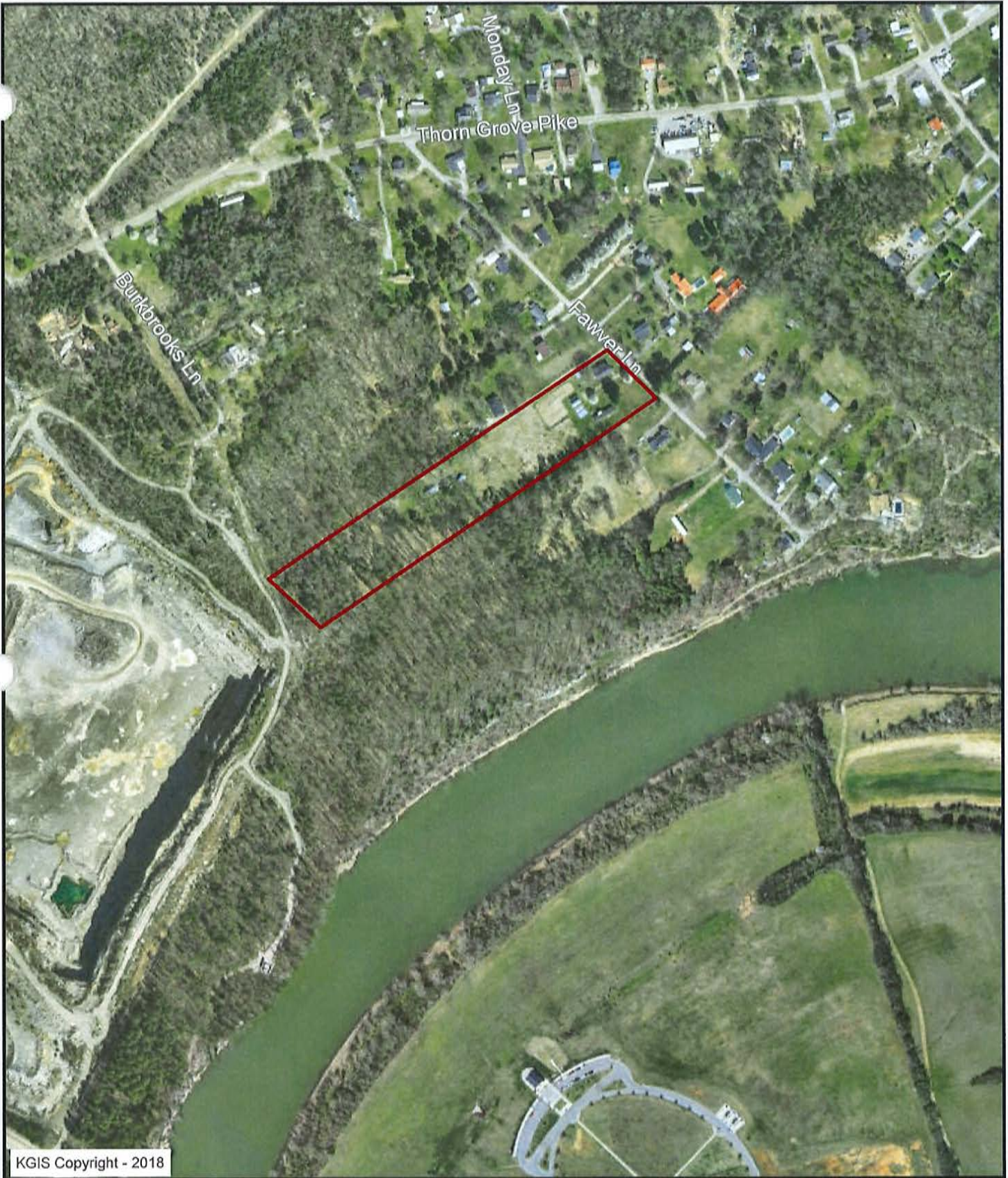
2937 Fawver Ln
Parcel ID 097-072, Acres 7.17

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BWI Forks of The River, LLC Quarry

2923 Fawver Ln

Parcel ID 097-071, Acres 5.87

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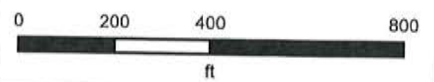
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BWI Forks of The River, LLC Quarry

2909 Burkbrooks Ln
Parcel ID 097-064, Acres 3.96

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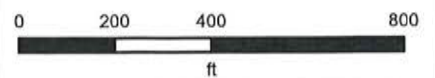
KGIS Copyright - 2018

BWI Forks of The River, LLC Quarry

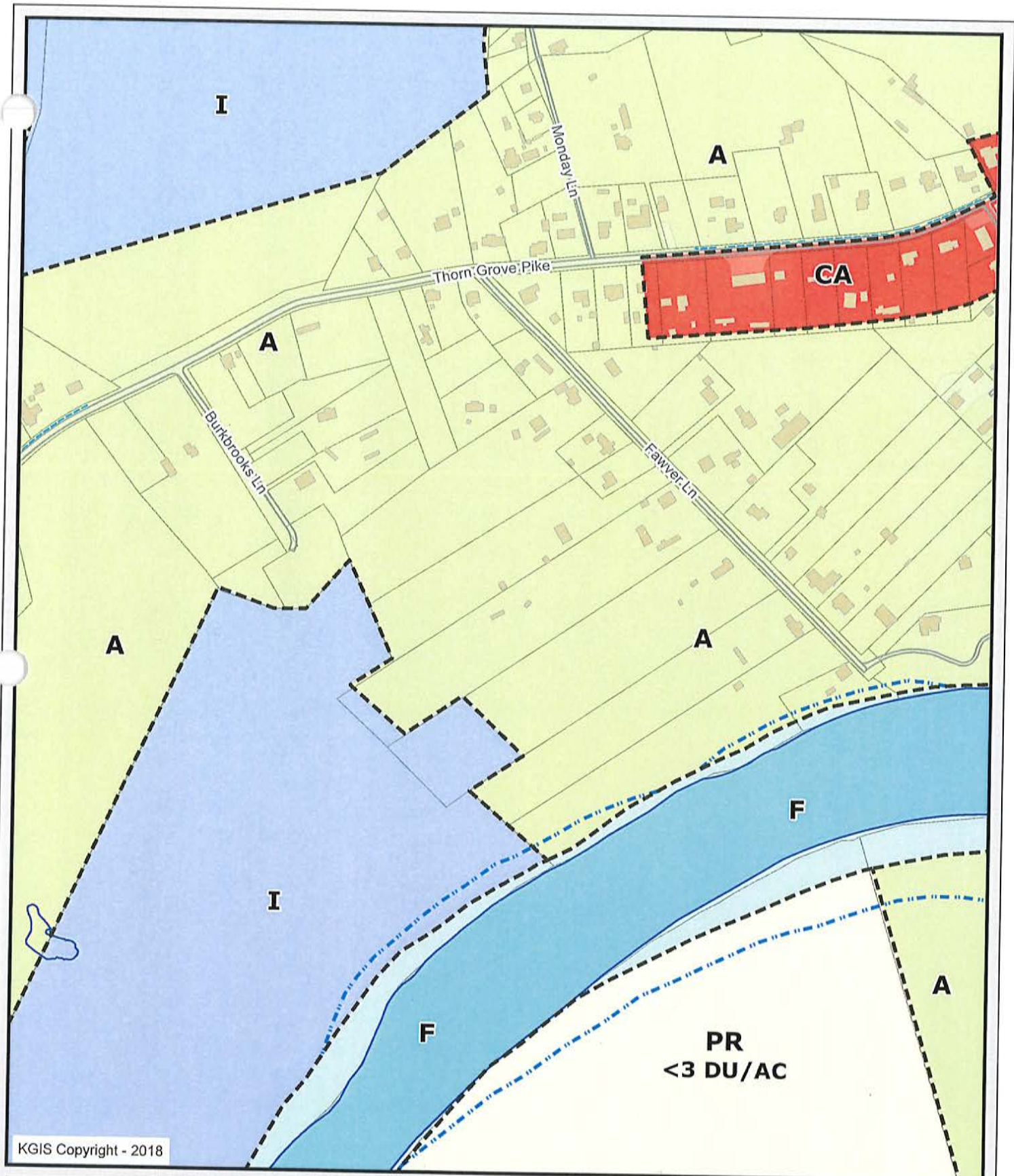
2907 Burkbrooks Ln
Parcel ID 097-063, Acres 0.94

Knoxville - Knox County - KUB Geographic Information System

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BWI Forks of The River, LLC Quarry
Zoning

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Blue Water Industries
 BWI Forks of the River, LLC
 MAP 97 Parcels
 Property Information Attachment

5-A-18-UR

MPC June 14, 2018

| Physical Site Address | Parcel # | # Acres | Zoning | Existing Land Use | Planning Sector | Sector Plan | Growth Plan | Census Tract | Traffic Zone | Jurisdiction & District | Approval Requested | Ownership |
|---|----------|--------------------------------|--------|-------------------|-----------------|-------------|---------------------------|--------------|--------------|-------------------------|--------------------|---|
| 2947 B Fawver Ln Knoxville, TN 37914 | 74.0 | 3.720 via 8/15/06 Survey | A | AGF or Vac | East Co. | AG | Rural Area | 54.01 | 126 | County, #8 | Mining | Blue Water Industries BWI Forks of the River, LLC 9509 Diggs Gap Road Heiskell, TN 37754 |
| 2943 Fawver Ln Knoxville, TN 37914 | 73.0 | 4.169 via 3/21/16 Survey | A | RR | East Co. | AG | Rural Area | 54.01 | 126 | County, #8 | Mining | Blue Water Industries BWI Forks of the River, LLC 9509 Diggs Gap Road Heiskell, TN 37754 |
| 2937 Fawver Ln Knoxville, TN 37914 | 72.0 | 7.170 via 3/21/16 Survey | A & I | RR | East Co. | AG | Rural Area | 54.01 | 126 | County, #8 | Mining | Blue Water Industries BWI Forks of the River, LLC 9509 Diggs Gap Road Heiskell, TN 37754 |
| 2923 Fawver Ln Knoxville, TN 37914 | 71.0 | 5.874 via 11/7/16 Survey | A & I | RR | East Co. | AG | Rural Area | 54.01 | 126 | County, #8 | Mining | Blue Water Industries BWI Forks of the River, LLC 9509 Diggs Gap Road Heiskell, TN 37754 |
| 2909 Burkbrooks Ln Knoxville, TN 37914 | 64.0 | 3.957 via 9/18/16 Survey | A | AGF or Vac | East Co. | AG | Planned Growth & Rural | 54.01 | 126 | County, #8 | Mining | Blue Water Industries BWI Forks of the River, LLC 9509 Diggs Gap Road Heiskell, TN 37754 |
| 2907 Burkbrooks Ln Knoxville, TN 37914 | 63.0 | 0.936 via 9/18/16 Survey | A | AGF or Vac | East Co. | AG | Planned Growth | 54.01 | 126 | County, #8 | Mining | Blue Water Industries BWI Forks of the River, LLC 9509 Diggs Gap Road Heiskell, TN 37754 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Agenda Item # 50

Attachment A
Mine Plan of Operations
Revegetation Plan
(5-23-2018)

Existing berm segment from service road closest to Dr. J.H. Gammon Memorial Bridge to the primary crusher station

From E. Governor John Sevier Highway (JSH) to the fence line at the overburden berm. Will be hydro seeded with a reclamation mix possibly intermixed with vetch and wildflowers as appropriate.

As the existing berm in this area is re-shaped to allow for access for reserves and possible internal roads. Dirt from future overburden removal will be placed as possible on the out slopes with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in with the possible addition of Eastern Redbud.

Existing berm segment from Pit 3 entrance road to intersection of E. Governor John Sevier Highway and Asbury Road at the traffic light

JSH to the fence line at the overburden berm. This area will be hydro seeded with a reclamation mix possibly intermixed with vetch and wildflowers as appropriate.

As appropriate dirt from future overburden removal will be placed as possible along the out slope of the berm rim with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in with the possible addition of Eastern Redbud.

Corner of berm at traffic light (intersection of JSH and Asbury Road)

All work in this location must occur outside of the TDOT JSH and KUB maintenance right of ways. As necessary and appropriate dirt will be placed at this location to facilitate vegetation growth. Closest to the overburden berm deciduous trees such as Red Maple, Tulip Poplar, or other similar species will be planted. In front of these species flowering deciduous trees such as Eastern Redbud, Dogwood, or other similar species will be planted. Then the area closest to JSH and Asbury Road will be planted with iris or other flowers depending on what has a better success potential.

Existing berm segment from traffic light at JSH and Asbury Road intersection up Asbury Road/Thorn Grove Pike to current berm end point

From Asbury Road (AR) and Thorn Grove Pike (TGP) to the toe of the overburden placement area. This area will be hydro seeded with a reclamation mix possibly intermixed with vetch as appropriate.

Dirt from future overburden removal will be placed as possible on the out slopes and along the rim with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in with the possible addition of Eastern Redbud.

Proposed new berm (I) from end point of existing berm on Asbury Road/Thorn Grove Pike to buffer on Parcels 097 063 and 064 on Burkbrooks Lane

Per Article 4 (Section 4.10.11) a landscape screen buffer consisting of a minimum of 15' in width of existing plant, tree, and shrub growth will be maintained in the area. If it is necessary to encroach upon this area for utility or road purposes. The disturbance will be to the level necessary to complete the work and then restored per the legal easement requirements. The toe of the berm will begin on the inside edge of this buffer. Dirt from future overburden removal will be placed as possible on the out slopes and along the rim with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in.

Proposed new berm (III) on Parcel 097 063 and 064 on Burkbrooks Lane to corner of proposed new berm (III) on Parcel 097 071

Per Article 4 (Section 4.10.11) a landscape screen buffer consisting of a minimum of 15' in width of existing plant, tree, and shrub growth will be maintained in the area. If it is necessary to encroach upon this area for utility or road purposes. The disturbance will be to the level necessary to complete the work and then restored per the legal easement requirements. The toe of the berm will begin on the inside edge of this buffer. Dirt from future overburden removal will be placed as possible on the out slopes and along the rim with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in.

Proposed new berm (III) on Parcel 097 071 to corner of and the proposed new berm (II) on Fawver Lane

Per Article 4 (Section 4.10.11) a landscape screen buffer consisting of a minimum of 15' in width of existing plant, tree, and shrub growth will be maintained in the area. If it is necessary to encroach upon this area for utility or road purposes. The disturbance will be to the level necessary to complete the work and then restored per the legal easement requirements. The toe of the berm will begin on the inside edge of this buffer. Dirt from future overburden removal will be placed as possible on the out slopes and along the rim with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in.

Proposed new berms (I and II) running adjacent to the French Broad River

Per Article 4 (Section 4.10.11) a landscape screen buffer consisting of a minimum of 15' in width of existing plant, tree, and shrub growth will be maintained in the area. If it is necessary to encroach upon this area for utility or road purposes. The disturbance will be to the level necessary to complete the work and then restored per the legal easement requirements. The existing road in this area that allows access to the United States of America Flag Sign located on the bluff will continued to be maintained. The toe of the berm will begin on the inside edge of this buffer. Dirt from future overburden removal will be placed as possible on the out slopes and along the rim with the area being hydro seeded with a reclamation mix possibly intermixed with vetch. As appropriate direct seeding of tree and shrub species from the Tennessee Department of Environment and Conservation Water Resources Division Chapter 0400-42-07-.04 will be mixed in.

Plan Notes:

All seeding, plantings, and work related to the Revegetation Plan will be performed based on recognized standards and recommendations for the time of year and climatic conditions best suited to promote the success of the work. A particular area may have to be worked for more than one planting/growing season and follow-up work of a different type (e.g. adding flowers or trees) in that area may have to be delayed until the desired levels of success in the preceding work are achieved.

Suite 403 • City County Building 400 Main Street Knoxville, Tennessee 37902 865•215•2500 FAX•215•2068 www.knoxmpc.org

Use on Review Development Plan

Name of Applicant: Blue Water Industries, LLC Date Filed: 3/24/18 Meeting Date: 5/10/18 Application Accepted by: DR Fee Amount: \$1200.00 File Number: Use on Review 5-A-18-UR



PROPERTY INFORMATION

Address: Multiple Parcels (See Attachment) General Location: S/S The Kings Road PK. E/S Barkbrooks Ln., W/S FAWCET LN. Tract Size: 25.8 ac No. of Units: Zoning District: (A) Ag + (I) Industrial Existing Land Use: Residences and open land Planning Sector: East County Sector Plan Proposed Land Use Classification: AG Growth Policy Plan Designation: Planned Growth Rural Area Census Tract: Traffic Zone: Parcel ID Number(s): 097-063-064 097-072-074 Jurisdiction: [X] County Commission 8 District

PROPERTY OWNER/OPTION HOLDER

PLEASE PRINT Name: BWI Forks of the River, LLC Company: Blue Water Industries Address: 9509 Diggs Gap Road City: Heiskell State: TN Zip: 37754 Telephone: 865-573-7625 Fax: 865-512-7661 E-mail: whillis@bluewaterindustries.com

APPLICATION CORRESPONDENCE

PLEASE PRINT Name: Walt Hillis Company: Blue Water Industries Address: 9509 Diggs Gap Road City: Heiskell State: TN Zip: 37754 Telephone: 865-512-7628 Fax: 865-512-7661 E-mail: whillis@bluewaterindustries.com

APPROVAL REQUESTED

[X] Development Plan: Residential Non-Residential [X] Home Occupation (Specify Occupation) 4.50.02(B)(6) Amendment I to the currently approved Mining Plan of Operations

APPLICATION AUTHORIZATION

I hereby certify that I am the authorized applicant, representing ALL property owners involved in this request or holders of option on same, whose signatures are included on the back of this form. Signature: Walt Hillis 3/20/2018 Name: Walt Hillis Company: Blue Water Industries Address: 9509 Diggs Gap Road City: Heiskell State: TN Zip: 37754 Telephone: 865-573-7625 E-mail: whillis@bluewaterindustries.com

SIGNATURES OF ALL PROPERTY OWNERS INVOLVED OR HOLDERS OF OPTION ON SAME MUST BE LISTED BELOW:

Please Sign in Black Ink:

(If more space is required attach additional sheet.)

| Name | Address • City • State • Zip | Owner | Option |
|--|---|-------|--------|
| Blue Water Industries | 4509 Diggs Gap Road, Heiskell, TN 37754 | ✓ | |
| BWI Farms of the River, LLC (all parcels) | | | |
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