

USE ON REVIEW REPORT

► **FILE #:** 7-B-26-UR **AGENDA ITEM #:** 31
 POSTPONEMENT(S): 7/9/2026 **AGENDA DATE:** 8/13/2026
 ► **APPLICANT:** THOMAS M. HALE
 OWNER(S): Vulcan Lands, Inc.

TAX ID NUMBER: 129 080 (PARTIAL), 08001 [View map on KGIS](#)
 JURISDICTION: County Commission District 6
 STREET ADDRESS: 1624 GRAYBEAL RD (0 GRAYBEAL RD)
 ► **LOCATION:** East side of Graybeal Rd, south of Buttermilk Rd
 ► **APPX. SIZE OF TRACT:** 60 acres
 GROWTH POLICY PLAN: Rural Area
 ACCESSIBILITY: Access is via Graybeal Road, an unstriped local street with 14-19 ft of pavement width within a 50-ft right-of-way.
 UTILITIES: Water Source: West Knox Utility District
 Sewer Source: West Knox Utility District
 FIRE DISTRICT: Karns Fire Department
 WATERSHED: Hickory Creek

► **ZONING:** A (Agricultural)
 PLACE TYPE: RL (Rural Living), HP (Hillside Ridgeline Protection)
 ► **EXISTING LAND USE:** Agriculture/Forestry/Vacant Land
 ► **PROPOSED USE:** Mining and mineral extraction (quarry) expansion

HISTORY OF ZONING: None noted.
 SURROUNDING LAND USE AND ZONING: North: Rural residential, single family residential - A (Agricultural)
 South: Rural residential, agriculture/forestry/vacant land - A (Agricultural)
 East: Single family residential (under construction), agriculture/forestry/vacant land - PR (Planned Residential) up to 2.5 du/ac
 West: Mining and landfills - A (Agricultural)
 NEIGHBORHOOD CONTEXT: The surrounding area is predominantly rural in character, with large lots off of thoroughfares and limited suburban-style development off of side streets. There is a commercial node to the southwest at the Everett interchange off of I-40/I-75.

STAFF RECOMMENDATION:

► Approve the request to expand existing quarry (mining and mineral extraction) operations, as shown in the plan of operations, subject to 10 conditions.

1. Meeting all requirements of Article 4, Section 4.50.02 (Standards for use-on-review approval of mining and mineral extraction) in the Knox County Zoning Ordinance, as detailed in the staff report comments.
2. Meeting all other applicable requirements of the Knox County Zoning Ordinance, including, but not limited to, Article 4.10, Supplementary Regulations Applying to a Specific, to Several, or to All Zones, which has stipulations related to noise and light, among others.
3. If outdoor lighting is to be added, all light sources shall be shielded and arranged so that lighting is directed away from any boundary adjacent to residential uses.
4. No clearing or grading of the subject site (expansion area) before the Concept Plan for the realignment of Graybeal Road is approved by the Planning Commission.
5. Preservation of trees as much as is practicable, and planting new trees where trees were either removed or are sparse, sufficient to meet the landscape screening standards specified in the Plan of Operations.
6. If County Commission approves the closure of Graybeal Road through the site as required to allow the quarry expansion as proposed, the relocation of Graybeal Road around the expansion area must be approved by the Planning Commission as a Concept Plan per Section 2.07.B. of the Knoxville-Knox County Subdivision Regulations. In no case shall the minimum width of the buffers, setbacks, berms, and landscape screening be reduced to accommodate the Graybeal Road alignment. However, the drilling and blasting setback shall only be required to be enlarged if necessary to maintain the 200-ft width of the large berm located between the drilling and blasting area and the relocated Graybeal Road right-of-way.
7. Submitting a preliminary berm and landscape screening plan with the Concept Plan application for the area between the realigned Graybeal Road and the adjacent properties. The Planning Commission may require adjustments to the proposed berms and landscape screening during the Concept Plan phase, if deemed necessary based on the detailed road design, to mitigate light trespass from headlights.
8. Providing an updated Plan of Operations to Planning staff before submitting the Concept Plan application for the relocation of Graybeal Road. This shall include removing all red line edits and updating plan sheets in Exhibit R2.0, R3.0, R4.0, and R8.0 to be consistent with this approval.
9. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
10. If during design plan approval or construction of the development, it is discovered that unforeseen off-site improvements within the right-of-way are necessary as caused by the development, the developer will either enter into a memorandum of understanding (MOU) with the County for these improvements or reimburse the County for their direct expenses (if completed by County crews) to make corrections deemed necessary.

COMMENTS:

***** REVISIONS SINCE JULY 9, 2026, PLANNING COMMISSION MEETING *****

See the applicant's cover letter dated 8/6/2026 and Attachment 2: Summary of Modifications and Additional Conditions at the end of the Plan of Operations document.

This request is to expand the quarry operations of Vulcan Materials Company. The Vulcan Materials Company facility has been in operation since 1974. Expansion requests were approved in 1996 (11-H-96-UR) and 2009 (4-B-09-UR). The facility as it operates today covers several parcels along Buttermilk Road, extending from Everett Road on its west to Graybeal Road on its east. This request adds the remainder of parcel 121 080, which is on both sides of Graybeal Road, and all of parcel 121 08001 to the operation. In order to avoid crossing Graybeal Road with its operations, the applicant proposes two options for relocating Graybeal Road around the expanded operations and connecting to Buttermilk Road to the north (Plan of Operations, Exhibit R8.0): Option A, maintain the same alignment and connection point to Buttermilk Road, and Option B, connect to Hickory Meadows Way in the northeast corner of the expansion area. While the road closure and relocation are not part of this use on review application, it is necessary to release the land occupied by the current street surface and allow the quarry expansion to be on contiguous land. Access to the site would not change as a result of this proposal; the applicant has stated they will retain their current access point off of Everett Road.

HOURS OF OPERATION

The Plan of Operations details the hours of operation and the types of activities that will be conducted. Construction of the berm would be limited to between 7 am and 6 pm; all blasting of the quarrying operation would be conducted from 9 am to 4 pm Monday through Friday only; all other quarry operations within the A zoned portion of the property (i.e., the property associated with this use on review) would be conducted from 7 am to 9 pm Monday through Saturday. See the General Mining Operations section in Exhibit R5.0, Proposed Plan of Operations, for the limited exclusions to this schedule.

BUFFERS AND SCREENING

Drilling and Blasting Setbacks

The quarry will maintain the following drilling and blasting setbacks from the back of lots fronting on Buttermilk Road (450 ft), Hickory Meadows Drive (500 ft), and Pittman Drive (450 ft).

Buffers and Landscape Screening

A 100-ft “undisturbed” buffer will be provided between the right-of-way of the realigned Graybeal Road and the adjacent properties, where “most” of the existing trees are to remain. Some trees will have to be removed to construct the “small berm”, described below. A 30-ft, Type A landscape screen will be provided at the property line consisting of existing and new trees. See Planning Exhibit B for Type A landscape screening guidelines.

Evergreen trees will be planted along the crest of the large berm on the Buttermilk Road and Hickory Meadows Drive sides of the extension. The planting will consist of two staggered rows of evergreen trees. Trees will be spaced 20 ft apart within each row, providing an effective spacing of 1 tree every 10 ft when measured across the staggered rows.

The existing wetlands and vegetation serve as the buffer on the Pittman Drive side of the extension. This does not preclude the necessary clearing and grading to construct the realigned Graybeal Road.

Berms

Small berm -- A landscaped berm (approximately 10 ft tall) located within the 100-ft undisturbed buffer, between the right-of-way of the realigned Graybeal Road and the neighboring properties of Hickory Meadows Drive. The berm width and type of landscaping are not defined.

Large berm – A 200-ft wide berm (approximately 25-30 ft tall) located along the Buttermilk Road and Hickory Meadows Drive sides of the expanded drilling and blasting area. The external slopes of the berm will be vegetated similarly to the existing berm along Buttermilk Road, and will have trees planted at the crest as described above under Buffers and Landscape Screening.

OTHER PROPOSED OPERATIONAL STANDARDS

See the Proposed Plan of Operations for additional information regarding the operational standards listed below and others.

1. Expanding the active vibration monitoring network from 7 to 12 locations. The additional monitors are dedicated to the area around the expansion. All monitors will continue to be maintained, and data collected by an independent third-party technical consultant.
2. Quarterly blasting data will be made available for review by appointment in the Quarry Office.
3. An opt-in pre-blast notification call list for neighbors consisting of two notifications for each planned blast: 1) an advance notice indicating that blasting is anticipated during the following week; and 2) a same-day notification provided within approximately one hour prior to the planned blast.
4. Blasting operations will be scheduled (day of week and time) based on site development requirements, proximity to nearby structures, and seasonal market demand, and are generally anticipated to occur up to two times per month; provided, however, that blasting shall not exceed ten occurrences in any calendar month.
5. Low-sound backup alarms on all mobile equipment operating in the expansion area, including during berm construction.

DEVELOPMENT STANDARDS FOR USES PERMITTED ON REVIEW (ARTICLE 4.10, SECTION 2)

The planning commission, in the exercise of its administrative judgment, shall be guided by adopted plans and policies, including the general plan and the following general standards:

THE USE IS CONSISTENT WITH ADOPTED PLANS AND POLICIES, INCLUDING THE COMPREHENSIVE PLAN OF KNOX COUNTY.

A. There are 7.7 acres of HP (Hillside Protection) area in the 60-acre extension, with 7.18 acres in the HP with slopes of 25 percent or less. Based on the nature of mining operations and the construction of the berms and relocated Graybeal Road, the majority of the HP area will be disturbed. If this request is approved, the disturbance in the HP area will be further detailed during the Concept Plan review for the relocation of Graybeal Road.

B. The property is designated as the RL (Rural Living) place type. The RL place type is described as being primarily comprised of single-family residential uses within a rural setting, and may include agriculture, open space, and some limited commercial that supports agriculture and civic uses. The primary land uses listed for this place type are open space and single family residential. The place type lists small-scale commercial, civic, and agricultural uses as secondary.

C. The proposed development may be inconsistent with the Comprehensive Plan's Implementation Policy 2, to ensure that development is sensitive to existing community character. The expansion of quarry activity at this location will produce dust, noise, and vibrations on neighboring properties. The operational standards in the Proposed Plan of Operations and conditions of approval are intended to help mitigate any adverse impacts.

- D. The realignment of Graybeal Road around the expansion area is consistent with the Comprehensive Plan's Implementation Policy 9, to coordinate infrastructure improvements with development.
- E. Maintaining Graybeal Road as a north-south connection is consistent with the recommendations of the Hardin Valley Mobility Study.

2) THE USE IS IN HARMONY WITH THE GENERAL PURPOSE AND INTENT OF THE ZONING ORDINANCE.

A. The A (Agricultural) zone provides for a wide range of agricultural and related uses as well as residential uses with low population densities and other compatible uses which generally require large areas or open spaces. This use requires large open areas and meets that criteria, but is not necessarily compatible with the uses described, including residential uses with low population densities.

B. "Mining and mineral extraction" is listed as a use permitted on review in the A zone, and is subject to all requirements set forth in Article 4.10, "Supplementary regulations applying to a specific, to several, or to all zones," and Article 4.50, "Standards for mining and mineral extraction."

C. Article 4.50 acknowledges that "mineral extraction may involve differing processes and may seriously affect mined parcels and surrounding properties" and provides the criteria for reviewing this use to try to mitigate those impacts. Article 4.50.02 is specific to surface mining and mineral extraction and is the relevant section for this review. This section stipulates that a conditional use permit must be approved by the Planning Commission and County Commission.

D. The standards for review contained in 4.50.02 are as follows, and the Proposed Plan of Operations meets these criteria.

1. Excavations shall be confined to areas at least one hundred (100) feet from any property line within or adjacent to any residential, agricultural or commercial zone, and shall be at least two hundred (200) feet from the property line of any dwelling or platted subdivisions. Further, no overburden, spoil bank or stockpile may be deposited within one hundred (100) feet of any such property lines, except with the written consent of the owners of the adjoining property, to reduce the elevation and conform with the existing contour or average grade of the adjoining property or in order to provide adequate drainage. The quarry operations are shown extending to a point 450 ft from the property lines to the residential properties to the north and south, and 500 ft from the platted residential subdivision to the east.

2. In any nonindustrial zone, the excavations shall be confined to areas at least one hundred (100) feet from the right-of-way line of any existing or platted street, road or highway; except that excavations may be conducted within such limits in order to reduce the elevation thereof to conform to the existing or established elevation of the adjoining or platted street, road, or highway, or in order to provide for adequate drainage. The site plan shows the quarry operations extending to a point 200 ft from the realigned Graybeal Road right-of-way, at least two hundred (200) feet from the right-of-way lines of any existing or platted street, road, or highway. No such buildings or equipment are proposed with this application, but should they be added in the future, they would be required to meet these criteria.

4. All roadways on, vehicular entrances to, and exits from the private, subject properties to any public roads shall be located to secure safety, lessen congestion and facilitate transportation and shall be maintained to eliminate any nuisance from dust to neighboring properties. Access to and from the site will remain as is. No new access points will be created onto the quarry site.

5. A Plan of Operations shall be submitted for approval by the Planning Commission and County Commission, and shall provide in all respects:

a. Adequate safeguarding and protection of neighboring interests and the general public health and safety. The hours of operation, proposed preservation of and addition of new trees to provide a landscape screen at the shared property line with residences, and the fence and berm providing sound attenuation and a visual barrier, will help mitigate some of the impacts of the quarry, though the noise and vibrations may still be a factor for nearby residents.

b. A satisfactory plan for the routing of trucks, materials and equipment from the points of excavation to the permittee's processing operations. Access is not proposed to change, so the traffic pattern to and from the site is not anticipated to be greatly impacted, other than the rerouting of Graybeal Road around the expansion area.

c. A plan and program for the restoration of the land to minimize potential detrimental effects on the area by reducing, insofar as is reasonably possible, peaks and depressions, and controlling erosion. The landscape plan proposes to capture and filter stormwater runoff in bioswales that will flow generally from north to east towards the low area at the southeast corner of the property where it feeds into Hickory Creek.

6. Whenever the permit issued by the Director of Code Administration and Enforcement has expired, or whenever the operation of excavation has been discontinued for any period exceeding twelve consecutive months, then, all plants, buildings, structures (except fences) and equipment shall be entirely removed from the property and the property shall be restored in accordance with the approved plan and program for restoring land, except approved otherwise by the Planning Commission upon request at that time. The "Reclamation" section of the Proposed Plan of Operations, Exhibit R5.0, details what would occur upon the completion of mining activities.

7. If the property to be used for such excavation is within one hundred (100) feet of any residential zone or platted subdivision, it shall be enclosed along the exterior boundaries as excavation progresses by a fence or landscape screen as prescribed by the Planning Commission. Berms of 10 ft and 25-30 ft in height, landscape screening, and fencing are proposed.

8. No excavation shall take place, or plant operated on any property in any nonindustrial zone, except between the hours of 7:00 a.m. and 9:00 p.m., except whenever any reasonable or necessary repairs to equipment are required to be made. The provisions of subsection 1. above shall also apply to this subsection. The "General Mining Operations" section of the Plan of Operations, Exhibit R5.0, details the hours of operation and the types of activities that will be conducted, and is also summarized in the staff comments above. Subsection 1. states, "All equipment, building and premises used for such purpose shall be constructed, maintained and operated in accordance with the performance standards of the county as set forth in section 4.10, 'Supplementary regulations applying to a specific, to several, or to all zones,' of these regulations."

3) THE USE IS COMPATIBLE WITH THE CHARACTER OF THE NEIGHBORHOOD WHERE IT IS PROPOSED, AND WITH THE SIZE AND LOCATIONS OF BUILDINGS IN THE VICINITY.

A. Mining and extraction, while not generally compatible with surrounding residential development, already operates in this area.

B. The proposed buffers, berms, and landscape screening help maintain the character of the area around the external boundary of the expansion area.

4) THE USE WILL NOT SIGNIFICANTLY INJURE THE VALUE OF ADJACENT PROPERTY BY NOISE, LIGHTS, FUMES, ODORS, VIBRATION, TRAFFIC CONGESTION OR OTHER IMPACTS WHICH MAY DETRACT FROM THE IMMEDIATE ENVIRONMENT.

A. Mining and extraction can produce effects that have adverse impacts on neighboring properties, such as smoke, noise, and vibrations. The applicant is proposing to install five additional active vibration monitors around the expansion area.

B. With the realignment of Graybeal Road, the proposal will have little impact on traffic since no new access points will be created; the site access point will remain the same.

5) THE USE IS NOT OF A NATURE OR SO LOCATED AS TO DRAW SUBSTANTIAL ADDITIONAL TRAFFIC THROUGH RESIDENTIAL STREETS.

A. Access to the site is off of Everett Road, a minor arterial. No additional traffic will be added through residential neighborhoods.

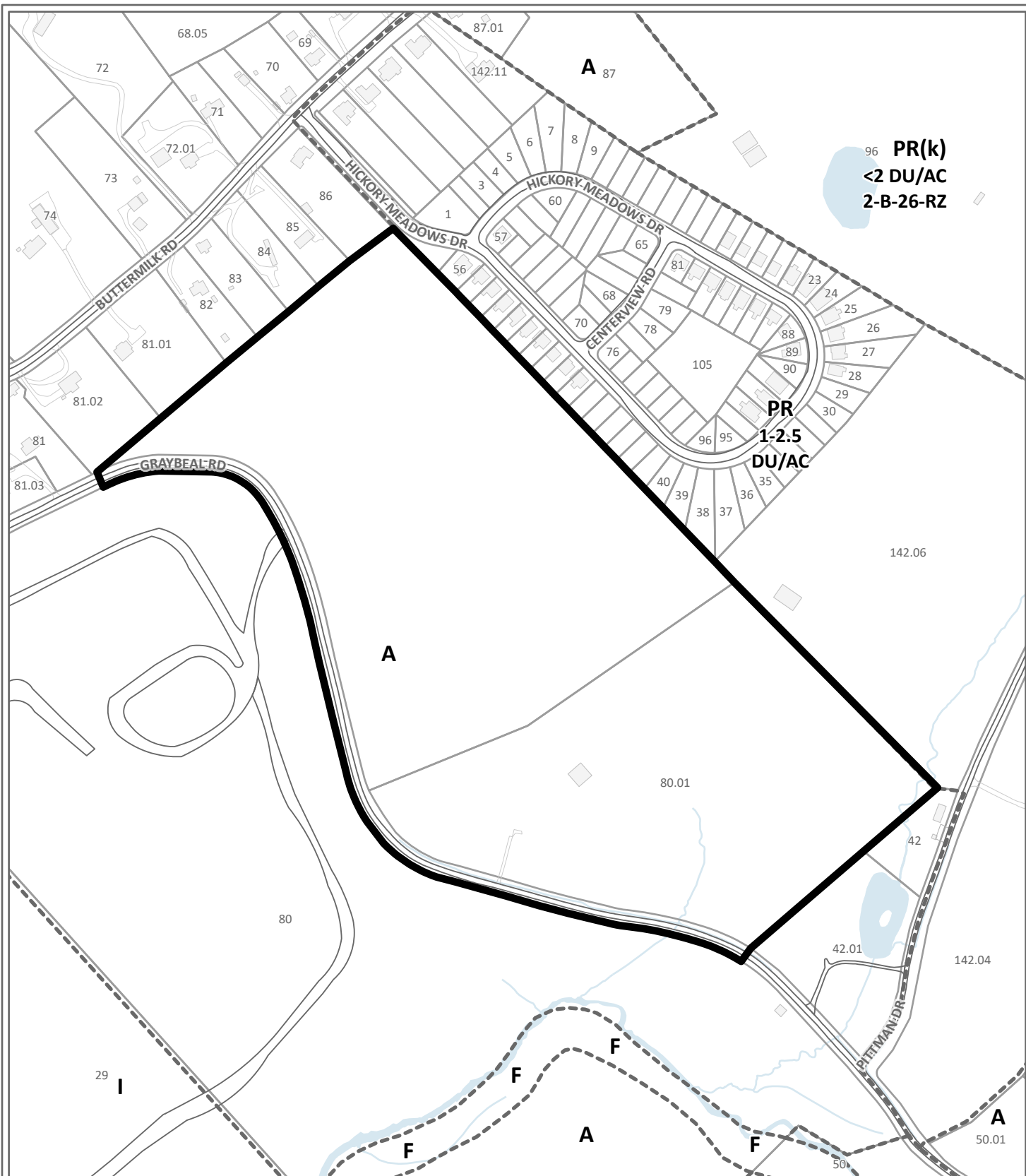
6) THE NATURE OF DEVELOPMENT IN THE SURROUNDING AREA IS NOT SUCH AS TO POSE A POTENTIAL HAZARD TO THE PROPOSED USE OR TO CREATE AN UNDESIRABLE ENVIRONMENT FOR THE PROPOSED USE.

A. There are no other known uses in the area that could be a potential hazard or create an undesirable environment for the proposed use.

ESTIMATED TRAFFIC IMPACT: Not required.

ESTIMATED STUDENT YIELD: Not applicable.

The Planning Commission's approval or denial of this request is final, unless the action is appealed. For more information on the appeal process, contact Knoxville-Knox County Planning.



USE ON REVIEW

7-B-26-UR

Petitioner: Thomas M. Hale



Mining and mineral extraction (quarry) expansion in A (Agricultural)

Original Print Date: 6/1/2026

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

Map No: 129

Jurisdiction: County

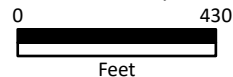
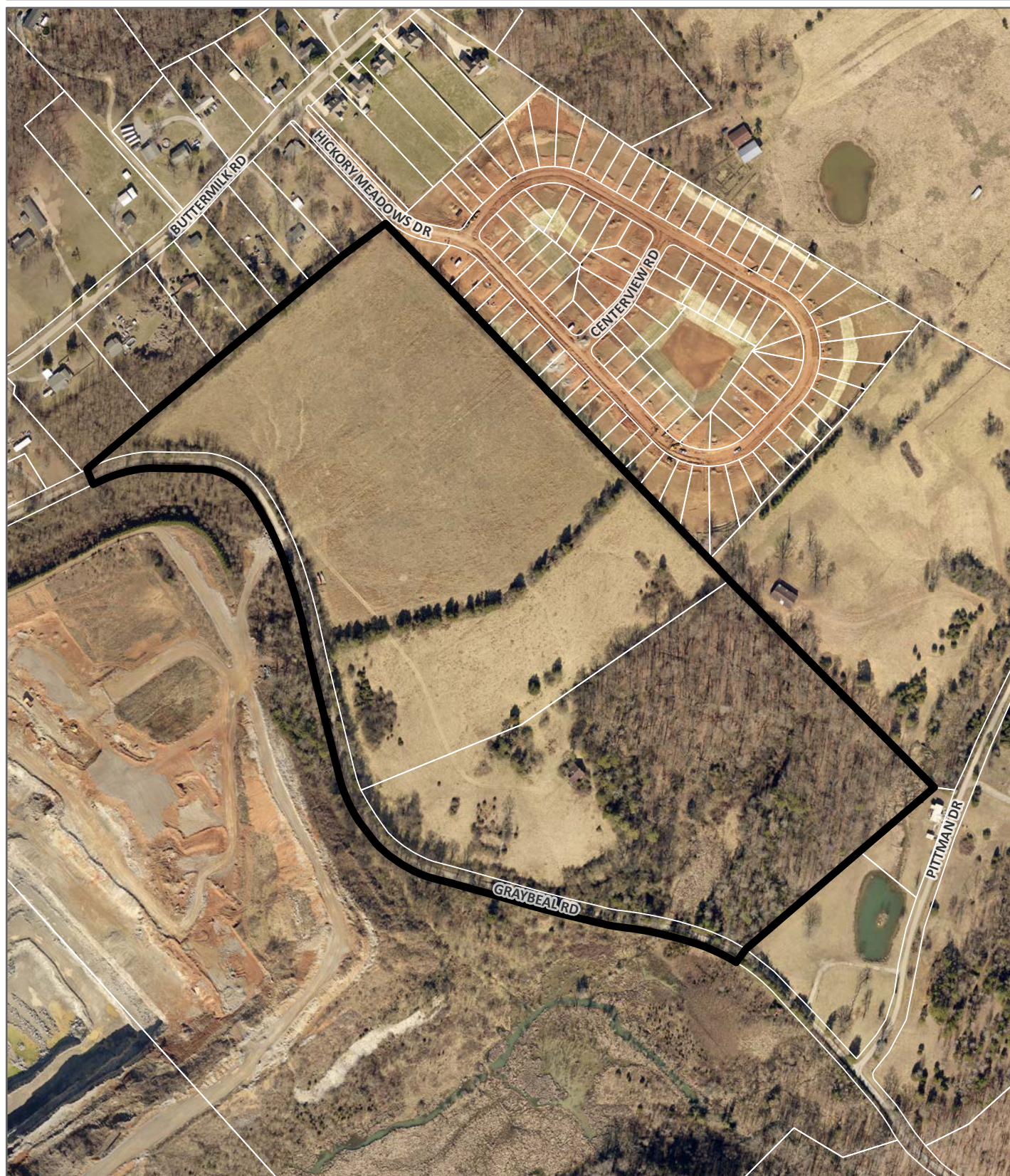


Exhibit A. Contextual Images



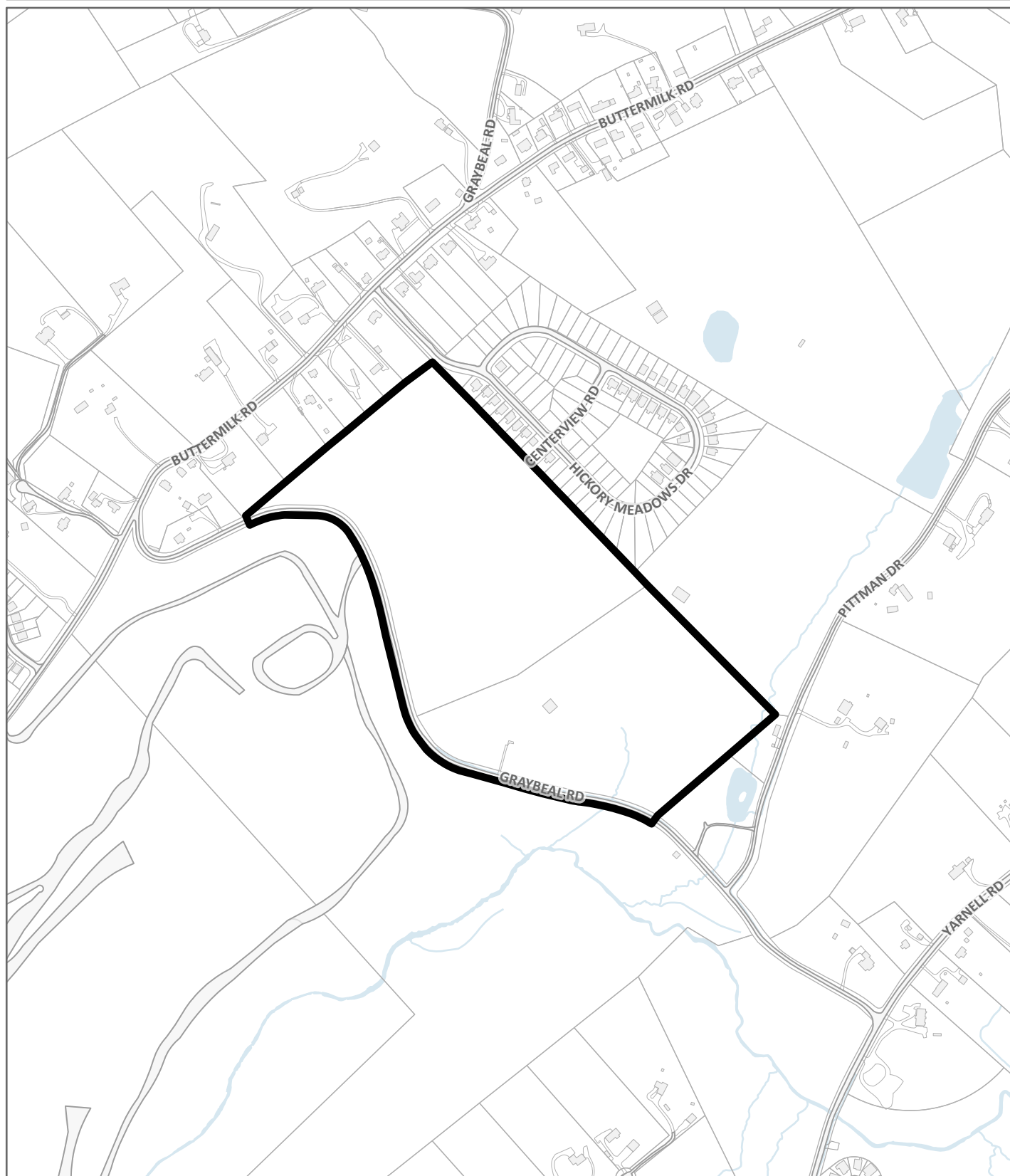
AERIAL MAP



Case boundary



Exhibit A. Contextual Images



LOCATION MAP

7-B-26-UR

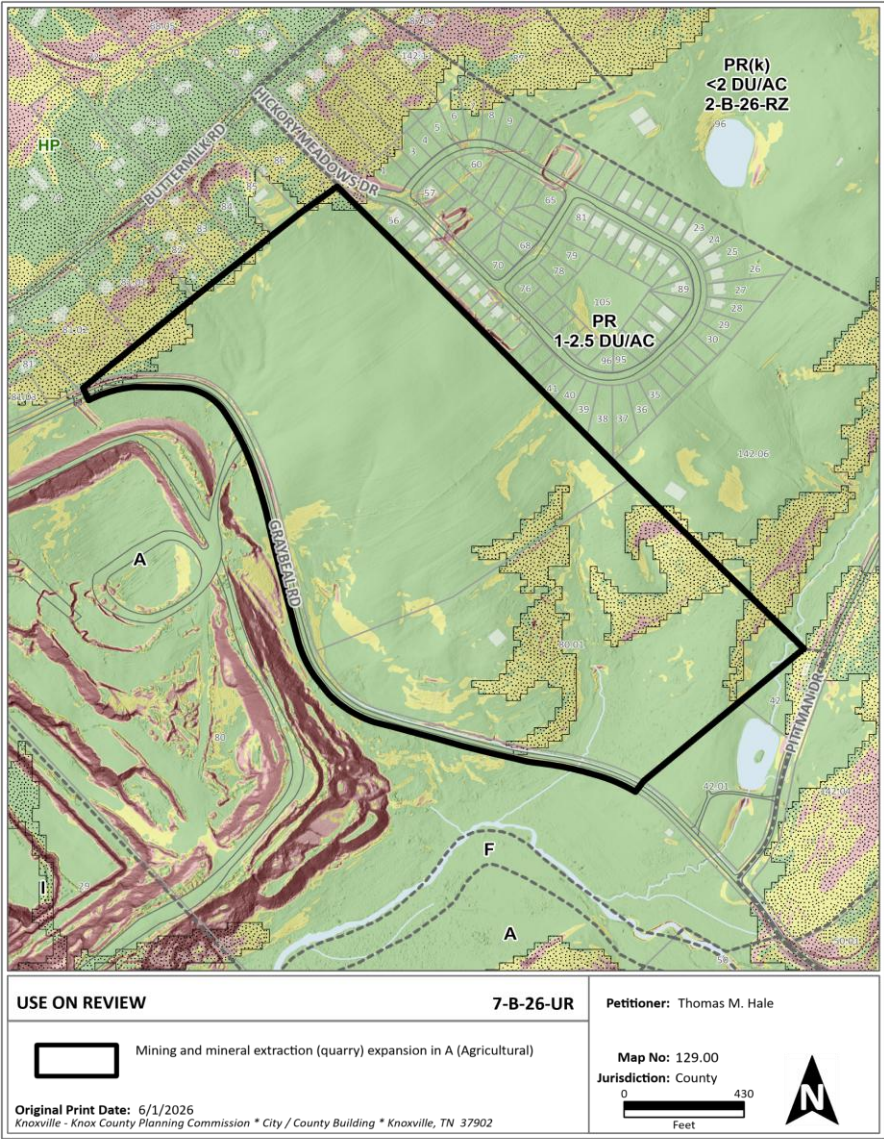


Case boundary

0 690
Feet



CATEGORY	ACRES	RECOMMENDED DISTURBANCE BUDGET (Percent)	DISTURBANCE AREA (Acres)
Total Area of Site	60.01		
Non-Hillside	52.30	N/A	
0-15% Slope	1.44	100%	1.4
15-25% Slope	5.74	50%	2.9
25-40% Slope	0.50	20%	0.1
Greater than 40% Slope	0.03	10%	0.0
Ridgetops			
Hillside Protection (HP) Area	7.70	Recommended disturbance budget within HP Area (acres)	4.4
		Percent of HP Area	57.2%





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7-B-26-UR
8/6/2026

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E.H. RAYSON (1923-2017)

August 6, 2026

Planning Staff
Planning Commissioners

*Via Submission on Case Website
in Public Comment Section*

**Re: Vulcan – Dixie Lee Quarry Extension Project
Knox Planning Case # 7-B-26-UR**

Planning Staff and Planning Commissioners,

Since the submission on **May 26, 2026** of Vulcan's initial Use on Review Application ("**Application**") with Knox Planning, Vulcan has engaged in broad community outreach about its project plans. This outreach has consisted of:

a. Mailing letters to approximately 160 neighboring property owners giving notice of, explaining its Application, and inviting them to a Community Open House on **June 11, 2026** where Vulcan representatives could answer their questions and hear their concerns. [A copy of the letter is attached to Vulcan's letter to Knox Planning dated July 17, 2026.]

b. The Community Open House was conducted on June 11, 2026 by 15+ Vulcan representatives and was attended by sixty (60) members of the community, three (3) County Commissioners and representatives of Knox County. [Information was presented on boards together with explanations and illustrations relevant to the Quarry's operations, copies of which are attached to Vulcan's letter to Knox Planning dated July 17, 2026.]

c. Many individual engagements outside of the Community Open House by Vulcan representatives with members of the community and other stakeholders, including some associated with an emerging group known as CARE.

Based on information gained from this community engagement, Vulcan developed an updated Use on Review Application (the "**Revised Application**") committing to underwrite options for the realignment and dedication of Graybeal Road (rather than its abandonment) to be placed over Vulcan's property and

installing landscaping within the 100-foot buffer along its property line. On **June 30, 2026**, Vulcan submitted a clean and redlined version of the Revised Application highlighting the changes made to the Application.

On **July 2, 2026** Knox Planning Staff submitted its report recommending approval of the Revised Application with eight (8) conditions (the “**July 2nd Staff Report**”).

Many of the participants at the June 11, 2026 Community Open House collaborated to form a group known as CARE which expressed the desire to meet with Vulcan to discuss the concerns of its members. At Vulcan’s invitation, on **July 6, 2026** it hosted, at the Dixie Lee Quarry facilities, the leadership team of CARE for a three (3) hour meeting. Following a preliminary discussion of Vulcan plans, the group was outfitted with personal protection equipment (hard hat, glasses, etc.) and given a complete tour of the Quarry operation. Following the tour, the group reconvened in the Vulcan offices for further discussions. At the conclusion of these discussions, CARE’s leadership committed to provide Vulcan with a list of its concerns and what it proposed that Vulcan do to allay those concerns. Vulcan also committed to consider other ways to refine its safe and compliant Revised Application that would address concerns expressed by CARE.

On **July 8, 2026** Vulcan submitted to CARE and to the staff of Knox Planning its letter stating eight (8) additional conditions that it would commit to upon approval.¹

Ultimately on Friday, **July 24, 2026** Vulcan received a list from CARE of its proposals. CARE representatives and Vulcan representatives met on July 28, 2026 at the Town of Farragut Community Center. In the days following the July 28, 2026 meeting, Vulcan considered the community’s input and on **August 3, 2026** issued its letter (see **Attachment 2**) agreeing to new and strengthened previous agreed to conditions.

Vulcan submits herewith an updated application for Use on Review with exhibits (#7-B-26-UR – Updated as of August 2, 2026) which incorporates, where appropriate, modifications to its original Application.

By this filing it is Vulcan’s desire and intent to: (i) submit its updated Use on Review Application included as **Attachment 1**, (ii) acknowledge and accept the staff’s eight (8) conditions listed on page 53-2 of the July 2nd Staff Report, and (iii) acknowledge and commit to include as part of Vulcan’s undertakings the additional conditions which are set out on **Attachment 2: Summary of Modified and Additional Conditions (updated 8-3-2026)**.

¹ The eight (8) additional conditions were proposed by Vulcan the day before the meeting of Knox Planning on July 9, 2026, the timing of which resulted in the Planning Commission postponing this matter until its August meeting.

Planning Staff
Planning Commissioners
Vulcan – Dixie Lee Quarry Extension Project
Knox Planning Case # 7-B-26-UR
August 6, 2026
Page 3 of 3

What is submitted to Knox Planning herewith is, in substance, the same information and commitments that Vulcan submitted on July 27, 2026. The information has simply been rearranged and with some unnecessary materials removed to avoid the possibility of confusion.

Yours truly,

A handwritten signature in black ink, appearing to read "Thomas M. Hale", with a horizontal line extending to the left.

Thomas M. Hale

TMH/tmm

Attachments

cc: Mike Reynolds
Carol Landrum
Brandon Bournes
Joshua Robbins

VULCAN LANDS, INC.

**Dixie Lee Quarry - Present Operation and Proposed Operation of Quarry Extension
(8-5-2026 UPDATE)***List of Exhibits*

- 1.0 Market Demand
- 2.0 Area Map showing Parcel Zoning
- R 3.0 Site Plan (Existing Quarry Area and Extension Area)
- R 4.0 Extension Area Site Plan; (Graybeal A) and (Graybeal B)
- R 5.0 Proposed Plan of Operation
 - 5.1 Safety, Health and Environmental Regulatory Oversight
 - 5.2 Safe Blasting Regulation and Independent Monitoring and Data
- 7.0 Proposed Permitted Area Metes and Bounds Description
- R 8.0 Quarry Extension Overview and Buffer and Screening Plan

Note: Underline = new text. ~~Strikethrough~~ = deleted text.

Introduction and Summary:

Vulcan Lands, Inc., (“Vulcan”), has filed herewith an application For Use on Review, for mining and mineral extraction, in order to obtain an Amended Permit extending the area of its Dixie Lee Quarry (the “Quarry Extension”). Starting before public notice was issued, Vulcan sent letters to more than 160 neighboring property owners and has been actively engaging with stakeholders and community members about this proposal. Outreach efforts have included meeting directly with property owners on their properties, hosting quarry tours, responding to emails and phone calls, and holding a Neighbor Information Open House on June 11, 2026. More than 60 people attended the open house to ask questions, provide feedback, and learn more about the project. Feedback gathered through these conversations and ongoing engagement efforts has helped inform refinements to the proposal, including \$7 million in accommodations and plan updates based on community feedback.

Dixie Lee Quarry has long been a valued part of Knox County, supplying the high-quality construction materials used to build and maintain the roads, schools, hospitals, homes, and places of worship that serve our community every day. Vulcan’s engineering and operations teams have developed a plan to update the existing operation, ensuring it can continue meeting the region’s needs for years to come.

Early activity at the quarry site in west Knox County began in the early 1960’s, providing aggregate for Interstate highway construction. In 1975, Vulcan obtained a permit for the Dixie Lee Quarry on land that it leased and has successfully operated to the present time.

Planning for the future, Vulcan strategically acquired approximately 161 acres of land in 1989 (the “Acquired Land”) adjacent to its existing quarry operation to help meet anticipated

demand for aggregate. In 1996, Vulcan applied for and received approval of an Amended Plan of Operation. In 2009, the company obtained approval of a Use on Review application, amending its permit to extend the permitted area to include approximately 104 acres of the Acquired Land. The remaining +/- 57.8 acres ("Remaining Acquired Land") and a portion of the Graybeal Road right-of-way (**Exhibit R 3.0 Site Plan**) comprise the area ("Subject Area") of this current Use on Review request.

Given the current and expected long-term demand, Vulcan desires to optimize its existing operation to access its reserve footprint on its property to responsibly serve the market and keep construction and maintenance costs as low as possible. See **Exhibit 1.0** for market projections.

The Knox County Zoning Ordinance recognizes that "the extraction of minerals is a basic industry" and that such deposits "do not necessarily align with the zoning boundaries established." Accordingly, it establishes specific standards for mining and extraction operations (Sections 4.50 and 4.05.02(A)–(C). Vulcan's plan to update its operations includes submitting this application for a permitted Use on Review for its two parcels on the remaining Acquired Land, located across Graybeal Road from its existing property and current mining area.

The two parcels in the Subject Area are currently zoned Agricultural and are designated as Rural Area on the Growth Policy Map of the Knoxville–Farragut–Knox County Growth Policy Plan (the "Growth Plan"). The Growth Plan states in Section 4.1 that permitted land uses in Rural Areas are determined by the Zoning Ordinance and Zoning Map, and that the Rural Area designation shall not impede the right of the landowner to use or develop the property for purpose permitted by the property's zoning.

Approximately sixty percent (60%) of the proposed Quarry Extension will be used for buffer, landscape and berm area, and a relocated Graybeal Road (if approved by the County Commission). The remaining approximate forty percent (40% - about 24 acres) will be used exclusively for stone extraction, with no accessory buildings, structures, fixed production equipment, or lighting. It will include a 300-foot buffer, a portion of which will feature a substantial vegetated screening berm along the Buttermilk Road and Hickory Meadows Drive residential properties not owned or controlled by Vulean and at least a 450-foot drilling and blasting setback from the property line.

The extension will not create additional demand, alter the location of existing quarry production plant areas, increase overall site production, or change customer truck traffic volume or patterns. Access to the extension area will be limited to internal routes within the quarry's existing operations, with no direct public or customer access via external roads or driveways. Vulcan will secure the area of the Quarry Extension by installing a fence around the entire Extension Area. The actual location of the fence will be determined based on the topography and stormwater management needs of the area.

If approved, the Use on Review would allow stone extraction from a portion of the Subject Area, only after Vulcan obtains the required state and Federal permits and completes the construction of the vegetated screening berm with nearly half of the total area dedicated to

~~buffers and vegetated screening berms~~, and is intended to meet market demand for construction aggregates in Knox County and the surrounding market.

As part of the proposed Quarry Extension, Vulcan will submit a road closure application to partially vacate Graybeal Road (on the East at Pittman Drive and on the West at Buttermilk Road) a little-used county road that dissects the land acquired by Vulcan in 1989. As noted hereafter, Vulcan recently learned of stakeholder and County interest in relocating Graybeal Road from its current location to a new location across Vulcan's land. In relation to the required 100-foot undisturbed, vegetated buffer and the outside toe of the 200-foot vegetated berm, Vulcan proposes to fund and construct a road upon an additional 60-foot dedicated right-of-way located generally between these two areas resulting in a 360-foot buffer with a design as worked out with the Knox County Engineering Department.

This application promotes the efficient use of an existing operation and leverages high-quality stone deposits that are vital to the Knox County economy. The proposal represents a natural and efficient extension of the current mining area and production infrastructure, and its established land use. It is also situated adjacent to property already zoned for industrial purposes.

The continued responsible and efficient production of high-quality construction aggregates is essential to the economic health of Knox County. Stone aggregate plays a critical role in building and maintaining infrastructure, including roads, bridges, utilities, water systems, buildings, and housing. Vulcan's products meet Department of Transportation (DOT) standards and are integral to supporting these community needs.

Present Operation (Existing Quarry Area):

Vulcan has a long-term lease on approximately two hundred thirty-nine (239) acres in west Knox County, and owns, in fee, approximately one hundred eighty-six (186) additional acres. Vulcan has held the leased property since 1975. It has owned most of its fee property since 1989. The area currently permitted is primarily zoned Industrial, while the land added to the permitted area in 2009, consisting of approximately one-hundred and four (104) acres, is zoned Agricultural. The area for which Vulcan seeks the Use on Review herein is also zoned Agricultural. See **Exhibit 2.0** for an area map that shows the zoning of the various parcels.

The quarry is located on 1716 Everett Road, north of and approximately 2,500 feet from Interstate 40, at the Watt Road interchange. As noted, the existing Dixie Lee Quarry operation is located on approximately 343 acres, and includes the quarry pit, offices, shop, production facilities, sales yards, berms, buffers and tenant hot mix asphalt plants. Buffers and berms comprise about 92.1 acres, as shown on **Exhibit R 3.0**.

Vulcan works hard to be a good neighbor by meeting or exceeding local, state, and federal community-focused safeguards and regulatory requirements that are protective of people, land, air and water. These include regulations and oversight from the Knox County Department of Air Quality Management, the Tennessee Department of Environment & Conservation (TDEC), the State Fire Marshal, the Mine Safety and Health Administration (MSHA), the U.S.

Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (USACE) as detailed in Exhibit 5.1.

Furthermore, Vulcan is, and has been, in compliance with the Knox County Zoning Ordinance. Vulcan specifically represents that its operations are and will be in compliance with Section 4.50 "Standards For Mining and Mineral Extraction," and Sub-Section 4.50.02(B), Paragraphs 1 through 9 of the Knox County Ordinance.

Proposed Plan of Operation Summary (Quarry Extension Area):

Vulcan desires to permit an additional +/- 57.8 acres it owns to serve as an extension (the "Extension Area") to its existing mining area for extraction and related uses to the Extension Area of which +/- 34 acres will be used for buffers or berms and +/- 24 acres for drilling and blasting as an extension of the existing surface mine (see **Exhibit R 4.0**). The purpose for amending its plan of operation is to optimize the existing mining area and allow for continued safe access to the existing reserves on its property to serve the Knox County market area. See **Exhibit R 5.0** for the full Proposed Plan of Operation.

The proposed Quarry Extension will be used exclusively for stone extraction, with no accessory buildings, structures, fixed production equipment, or lighting. Section 4.50.02 of the Regulations requires certain setbacks from adjoining properties zoned Residential, and Vulcan will continue to meet these regulations as it has demonstrated for more than fifty years. The Knox County Zoning Ordinance requires a 200-foot set back from residentially zoned property at § 4.50.02.B.2. However, Vulcan proposes that adjacent properties not owned or controlled by Vulcan will be screened by a 300-foot buffer (360-foot if Graybeal is relocated), including a 100-foot undisturbed fenced area and a 200-foot vegetated berm similar to the existing berm along Buttermilk Road (and possibly an additional 60-foot road right-of-way). There will be no public or customer access to the extension area from external roads; all access will occur internally through the existing quarry, with no impact on local traffic.

Drilling and blasting on the Extension ~~extraction~~ will occur at least 450 feet ~~300 feet (possibly 360 feet)~~ from neighboring properties. All mining Operations ~~operations~~ will take place behind the vegetated berm and buffer areas and will not be visible from adjacent properties. The extension will be incorporated into the existing mine permit and operate under the same local, state, and federal regulations as the current quarry.

Vulcan's blasting results at the Existing Quarry are in full compliance with State limits and have been for many years. The Quarry Extension will be administered in accordance with the same regulations and follow the same proven operational best practices and procedures including monitoring performed by an independent third-party vibration expert consultant (See **Exhibit 5.2 Safe Blasting Regulation and Independent Monitoring and Data**).

Because Graybeal Road bisects both the existing quarry area and the proposed quarry extension area (each owned by Vulcan), Vulcan is concurrently seeking approval from the Knox County Commission, alongside this Use on Review application, to vacate a portion of Graybeal Road between Pittman Drive on the East and Buttermilk Road on the West (~~see associated traffic~~

study in **Exhibit 6.0**). Residents on the west side near the Buttermilk Road would access their properties via a private drive. Vulcan will fund roadway improvements at the Graybeal Road/Pittman Drive curve, and Pittman Drive will continue to connect to Yarnell Road.

Vulcan has been in recent discussions with Knox County Engineering about the possibility of Vulcan replacing current Graybeal Road with a wider, realigned and improved Graybeal Road. To date those discussions have involved optional realignments across Vulcan's property generally as shown in **Exhibit R 4.0** marked **Graybeal A** and **Graybeal B**. The options in the subject area for relocating a new and improved road will require Vulcan to incur engineering expenses, and to have further discussions with Knox County. The new road would be under County ownership and control and built to current County standards, the details of which would be worked out with Knox County Engineering and funded by Vulcan without taxpayer dollars.

Vulcan acknowledges that the closure of a portion of Graybeal Road and/or the relocation of the Road will require the approval of Knox County Commission. Once finalized, a condition of Knox Planning's staff recommendation is that a concept plan for the Road would need to come back to Planning Commission for approval. The point of significance for this Use on Review application is that the effect of relocating Graybeal Road to the area being discussed is to enlarge the buffer between adjacent landowners and active mining operations by an additional 60 feet and adding a 10-foot-high landscaped screening berm long the Hickory Meadows Drive portion of the extension. As contemplated by the Knox County Zoning Ordinance which contemplates conditions upon approvals, Vulcan seeks approval of its application conditioned upon working out the details of the road relocating with Knox County.

The metes and bounds description of the proposed permitted area, which is the subject of this Use on Review, is attached as **Exhibit 7.0**. If the Knox County Commission approves vacating a portion of Graybeal Road, Vulcan will extend its existing berm north along the properties adjacent to Buttermilk Road and shift the existing berm along Graybeal Road further north.

This will allow the current permitted area, the relocated Graybeal Road right-of-way, and the Extension Area to merge into a single amended Permit Area. The total area would consist of approximately 405 acres.

Vulcan proposed the following conditions, the same as imposed in its 2009 Use on Review application, upon its activities in the Extension Area: (i) the construction of the berm is to be limited to the hours between 7:00 AM and 6:00 PM Monday through Friday; (ii) all blasting associated with the quarrying operation shall be permitted between 9:00 AM and 4:00 PM, Monday through Friday only and not on Federal Holidays; and (iii) all other quarry operations within the portion of the site that is zoned A (Agricultural) must be limited to the hours of 7:00 AM and 9:00 PM, Monday through Saturday. Vulcan will also require the use of low-sound backup alarms on all mobile equipment operating on the Quarry Extension, including during berm construction.

Conclusion:

As previously outlined, the land covered by this application for Use on Review is zoned Agricultural. Under the Knox County Zoning Regulations, Section 5.22.03, Uses Permitted on Use on Review, for property zoned Agricultural, under Paragraph K, mining and mineral extraction activities are specifically permitted, so long as the property owner complies with Section 4.10 and Section 4.50 of the Ordinance. Section 4.50.02(C) allows the Planning Commission and the Board of Commissioners to approve an amended permit to alter the plan of operations previously approved. The drafters of the Ordinance knew that some land uses would be a challenge, but the need for them would warrant their existence, such as the extraction of strategic, necessary and useful materials from the earth as Vulcan seeks through this application. The Zoning Ordinance provides that "certain uses . . . are unique in nature, require large land areas, are potentially incompatible with existing development . . ." and "because they more intensely dominate the area in which they are located" and "the nature of such use makes it desirable that they be permitted to locate therein." Knox County Zoning Ordinance Section 4.10 Section 2, Development Standards for Uses Permitted on Review.

Aggregate resources are non-renewable strategic materials, and existing extraction operations must periodically update their plans to maintain safe and reliable access to existing high-quality reserves. Doing so ensures the quarry can continue to responsibly support the infrastructure, construction, and economic needs of Knox County.

Under this proposed plan, Dixie Lee Quarry will continue to efficiently utilize its existing reserves and infrastructure to meet current and future local demand for high-quality aggregates. Optimizing this established operation is essential. Developing new quarries would require developing hundreds of acres of land for new industrial use, adding significant truck traffic, and increasing construction and maintenance costs, particularly due to longer haul distances.

The Quarry Extension will be screened by 300 feet, and possibly 360 feet, of buffer area and substantial vegetated berms, and drilling and blasting will be separated from adjacent residential lot lines by at least 450 feet (see Exhibit R 8.0). It will be required to operate under regulations that are protective of people, land, air and water. These include oversight from the Knox County Department of Air Quality Management, the Tennessee Department of Environment & Conservation (TDEC), the State Fire Marshal, the Mine Safety and Health Administration (MSHA), the U.S. Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (USACE) (see Exhibit 5.1).

Vulcan is at the point in its engineered mine plan and capital cycle that it needs to move forward today with this critical investment of more than \$27 million in the County. Because the engineering and other permitting processes take additional time, it is not foreseeable for the berm and road construction to begin until one year after County approval and the construction process to take place over the course of about two years, during which time Graybeal Road will remain open. Depending on market demand, it could take another 5 to 10 years for drilling and blasting to reach the middle of the mining area on the extension.

For nearly 70 years, Dixie Lee Quarry has helped support Knox County and surrounding communities. Vulcan provides local jobs and contributes substantially to the county's tax base, and it remains committed to ongoing investment in the region.

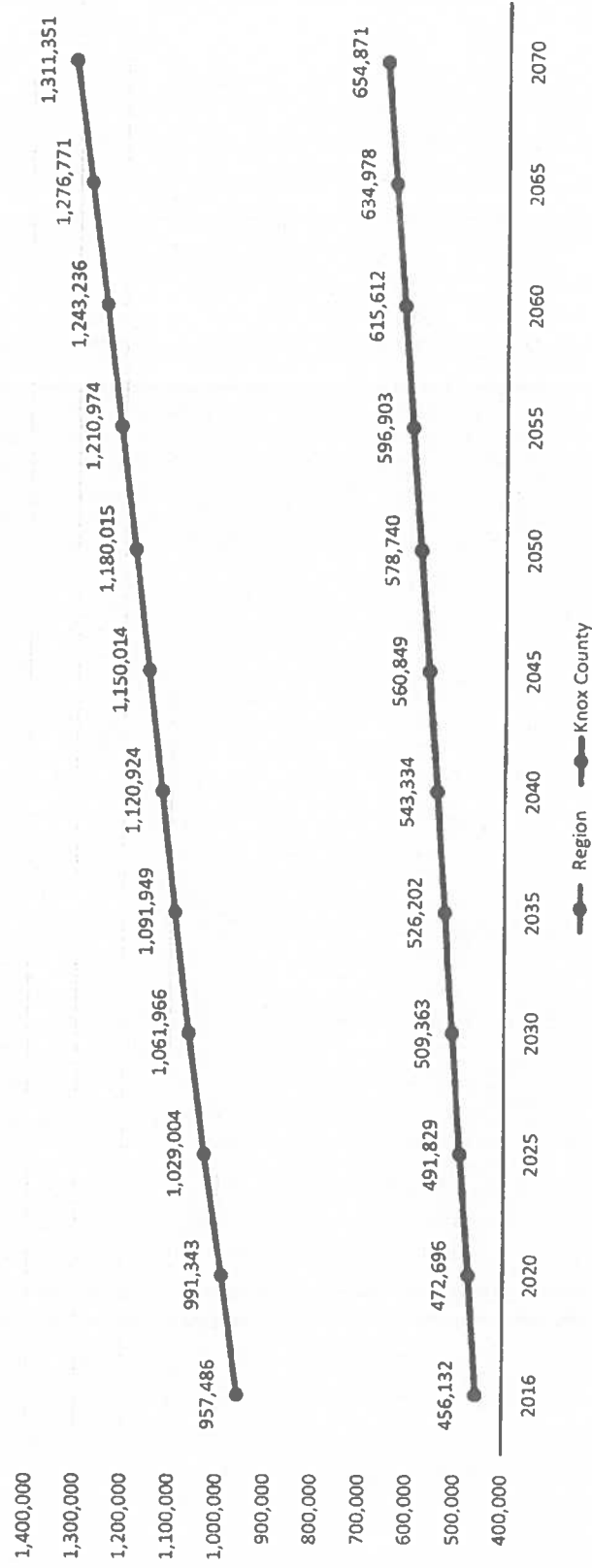
Given Vulcan's long record of responsible operation, the availability of high-quality on-site reserves and consistency with Knox County's Use on Review provisions, Vulcan respectfully requests approval of this proposed plan of operation subject to the addition to the 300-foot buffer of an added 60 feet of right-of-way to be occupied by the relocation of Graybeal Road, and conditioned upon the approval of Knox County Commission of the abandonment and relocation at the applicant's expense of Graybeal Road similar to the alignments shown on **Exhibit 4.0 Graybeal A or Graybeal B, plus an additional 90-foot minimum setback from drilling and blasting activity.**

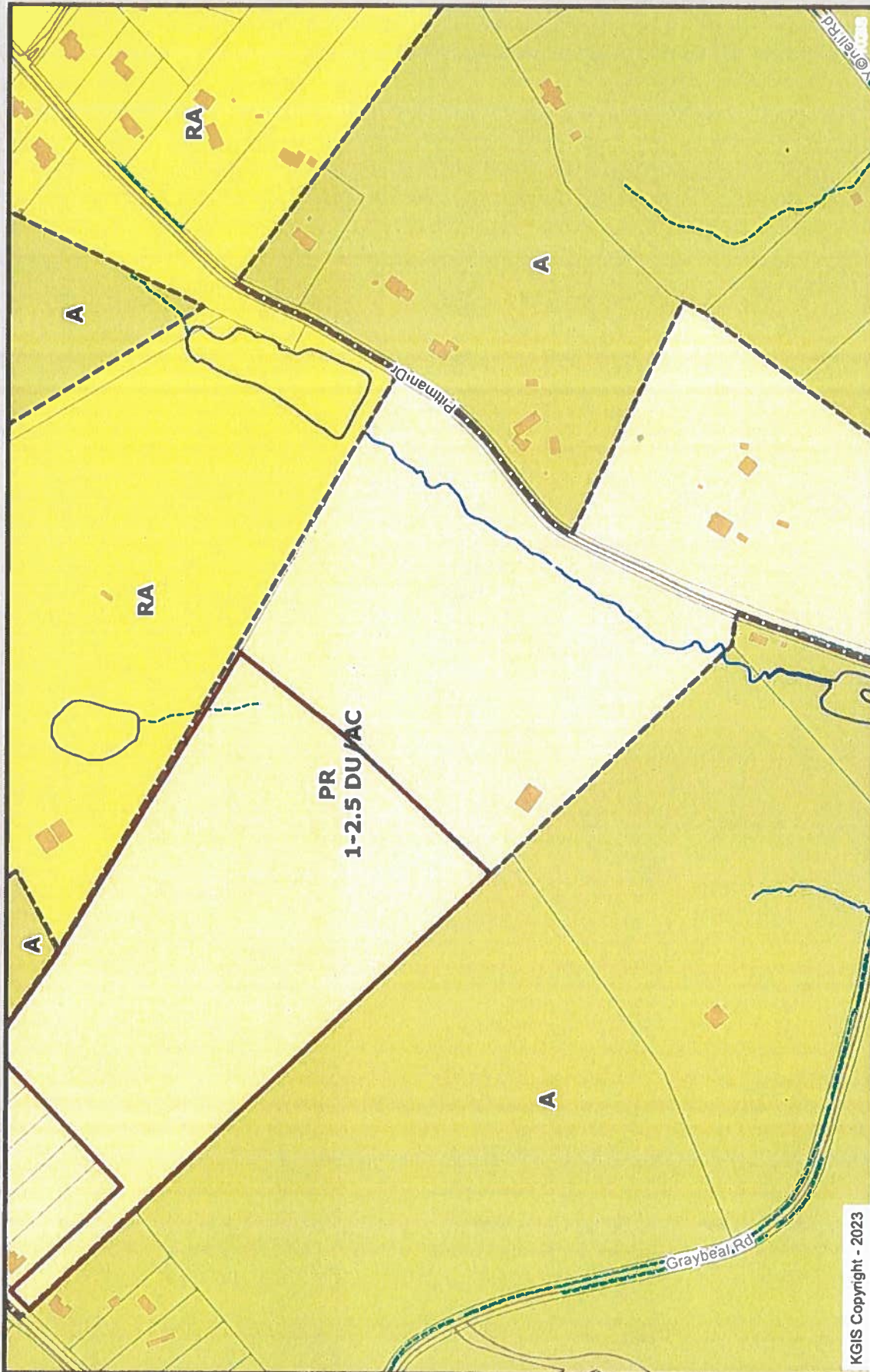
PROJECTED POPULATION GROWTH, KNOX AND SURROUNDING COUNTIES, 2016-2070

County	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	Growth Rate 191-2020-70
Anderson County	75,936	77,227	78,454	79,329	80,027	80,677	81,349	82,050	82,750	83,492	84,314	85,216	10.3
Blount County	128,670	134,265	140,526	146,031	150,925	155,410	159,729	164,105	168,560	173,138	177,818	182,606	36.0
Graininger County	23,072	23,443	23,742	23,835	23,762	23,578	23,345	23,117	22,913	22,736	22,572	22,413	-4.4
Jefferson County	53,535	55,178	56,842	58,145	59,166	59,986	60,710	61,447	62,244	63,114	64,045	65,037	17.9
Knox County	456,132	472,666	491,829	509,383	526,202	548,334	568,849	576,740	596,903	615,612	634,978	654,871	38.5
Loudon County	51,454	54,039	56,835	59,231	61,341	63,329	65,398	67,706	70,267	73,043	75,973	79,033	46.3
Roane County	52,874	52,819	52,427	51,713	50,780	49,760	48,750	47,808	46,944	46,161	45,458	44,827	-15.1
Sevier County	96,673	102,302	108,834	114,824	120,405	125,752	131,080	136,545	142,208	148,061	154,039	160,083	56.5
Union County	19,140	19,375	19,515	19,495	19,341	19,097	18,804	18,496	18,186	17,879	17,573	17,266	-10.9
Region	957,486	991,343	1,029,004	1,061,966	1,091,949	1,120,924	1,150,014	1,180,015	1,210,974	1,243,236	1,276,771	1,311,351	32.3

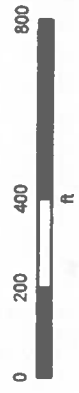
Source: Boyd Center for Business and Economic Research, University of Tennessee.

Projected Population Growth, Knox County and Region, 2016-2070





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Knox County zoning map-Hickory Creek Partners

Knoxville - Knox County - KUB Geographic Information System

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Graybeal A

Existing Quarry

Overburden Removal and Pit Development



MAP SHOWING
VULCAN CONSTRUCTION MATERIALS, LLC
DIXIE LEE QUARRY
CONCEPTUAL SITE PLAN MAP

Copyright Clearance Center

Case No.	Case Name	Case Type	Case Status	Case Date
1	Case 1	Case 1	Case 1	Case 1
2	Case 2	Case 2	Case 2	Case 2
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1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Conclusion**
 6. **References**

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Product Details

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Map Certification

strong financial statements or your in-depth
 knowledge of a firm's basic business practices.

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Figure 1

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Journal of Management Education

EXHIBIT R 5.0 (7-27-2026 UPDATE)

Proposed Plan of Operation: Quarry Extension

Underline and strikethrough notates updated text.

Site Background

The Vulcan Dixie Lee Quarry ("Existing Quarry") is located at 1716 Everett Road in Knox County, TN. It began operating in the 1960's and has been operated by Vulcan since at least 1975. In 1989, Vulcan acquired additional land for future extension of the quarry. A portion of this land was previously permitted. The remaining +/- 57.8 acres is separated from the Existing Quarry by Graybeal Road. Vulcan seeks to vacate a portion of road and to add the remaining acreage (the "Quarry Extension") to the Existing Quarry. This Proposed Plan of Operation for the Quarry Extension does not change Existing Quarry fixed site infrastructure, including production plant equipment, stockpile areas, entrance and exit driveways, scale and wheel wash, office and shop.

Quarry Extension Access

Access to the extension area will be limited to internal routes within the quarry's existing operations, with no public or customer access. Employee traffic, customer traffic, tenant traffic, contractor traffic and deliveries will continue to use the Existing Quarry entrance located at 1716 Everett Road. The Quarry Extension will not create additional demand, alter the location of existing quarry production plant areas, increase overall site production, or change customer truck traffic volume or patterns.

Safety and Health Information

Operations at the Existing Quarry are regulated by local, state and federal agencies including the Knox County Department of Air Quality Management, the Tennessee Department of Environment & Conservation (TDEC), the State Fire Marshal, the Mine Safety and Health Administration (MSHA), the U.S. Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (USACE) see EXHIBIT 5.1.

The MSHA Mine ID number for the site is 40-01427. The Quarry Extension will be added to and covered by this same Federal ID number. Federal inspectors inspect the quarry a minimum of twice per year. MSHA regulations enforce mandatory standards under the Federal Mine Safety and Health Act, including employee exposure to noise and dust, safe operation of fixed and mobile equipment, safe mining practices, employee training programs, and more.

Geology

Rock formations at the Dixie Lee Quarry and Extension Area include the Maynardville Limestone and Copper Ridge Dolomite. These formations were deposited in flat layers between 490 and 520 Million years ago, while East Tennessee was covered by a warm shallow sea. Tectonic mountain building forces have tilted and folded the flat layers into often steeply dipping

and folded beds of limestone and dolomite that produce high-quality construction aggregate material today.

The steeply dipping and folded layers of the local geology, combined with continued growth and development of the surrounding community, mean that accessible and mineable geologic deposits are found in very limited locations.

The Quarry Extension contains a known mineable geologic deposit adjacent to an existing operating quarry and infrastructure, providing sensible continued access at an established site to a resource that is necessary to construct and maintain roads and other infrastructure in the community. Topsoil, clay and weathered rock and shale lie on top of the high quality dolomite and limestone that are mined and produced for construction aggregate. This material (collectively known as overburden) must be removed to access the high-quality marketable stone beneath.

Wetlands

As with the existing quarry, Vulcan will observe all legally required distances from regulated features. As part of the application due diligence, Vulcan retained a qualified stream and wetland consultant to map and delineate water features on the Extension. The Tennessee Department of Environment and Conservation (TDEC) has reviewed and concurred with the delineation work that will be reviewed by the Army Corps of Engineers (USACE).

Overburden Removal

The overburden material will be removed by excavators or loaders and placed into haul trucks to build the proposed vegetated screening berms. Remaining overburden will be placed in mined out portions of the quarry site. Some pinnacles of very weathered shale and rock beneath the topsoil and clay may require engineered, safe drilling and blasting before removal and placement in the quarry.

Buffer and Drill/Blast Setback

Vulcan will maintain a minimum 450-foot drill and blast setback from the back of residential lots fronting on Buttermilk Road, Hickory Meadows Drive and Pittman Drive which is 125-percent beyond the County requirement of 200 feet.

Adjacent properties not owned or controlled by Vulcan will be screened by a minimum 300-foot buffer, including a 100-foot undisturbed ~~fence~~ area. Most of the existing trees within the 100-foot buffer will remain and Vulcan will augment the existing vegetation with a 15-foot Type A landscape area. Vulcan will also construct a 20-25 foot high vegetated screening berm (like the existing berm along Buttermilk Road) along the Buttermilk Road and Hickory Meadows Drive sides of the Extension, with existing wetlands and vegetation serving as a buffer on the Pittman Drive side. The entire Extension will be fenced.

If a realignment of Graybeal Road is worked out with Knox County as Vulcan has proposed, an additional 60-foot road right-of-way would be placed between the 100-foot undisturbed area and 200-foot vegetated berm area and make the overall buffer at least 360 feet from adjoining property owners. The new road would be under County ownership and control and built to current County standards, the details of which would be worked out with Knox County Engineering. Once finalized, a condition of Knox Planning's staff recommendation is that a concept plan for the Road would need to come back to the Planning Commission for approval. Vulcan will also construct a second landscaped berm (approximately 10 feet high) within the 100-foot undisturbed area, between the 60-foot right-of-way reserved for a new road and along the neighboring properties of Hickory Meadows Drive. Under this option, the new road would be constructed concurrently with the screening berms.

Prior to extending the mining area onto the Quarry Extension, the vegetated screening berms will be constructed using onsite overburden material to provide visual and sound screening for neighbors. Topsoil will be removed and segregated for spreading on the berm prior to berm vegetation activities. There will be a minimum ~~100~~ 160-foot buffer between the property line and the outer toe of the second berm.

Once berm construction is complete and weather conditions are favorable for planting, the berms will be hydroseeded with an appropriate TDOT permanent reclamation seed mix (specific mix will be dependent on planting date and weather conditions), or something similar including a fast-growing nurse crop mixed with deep rooted perennial grasses, but possibly intermixed with native grasses and wildflowers.

The existing screening berm along Buttermilk Road will be extended along the north and west sides of the Quarry Extension, as shown on the preliminary site plan map [Exhibit R 4.0]. Along the south/southeastern side of the Subject Property, a 450-foot wide buffer of trees and heavy vegetation will provide screening.

The extended berm will be approximately 20-25 feet above ground level as generally depicted on the illustrative sightline drawing [Exhibit R 8.0], following the existing topography with planned slopes of 2 to 1. Stormwater runoff from the outer slopes of the berm (and relocated Graybeal Road) will be captured in a bioswale situated along the toe of the berm and generally flow north and to the east, toward the low area at the southeast corner of the property, where it ultimately feeds into Hickory Creek, as it does today. Water captured on the interior mining area side of the berm will be routed into the Existing Quarry to be used for dust control and production. Water in the quarry is managed through an existing permitted water discharge point see Exhibit 5.1.

Safe Drilling and Blasting

Efficient excavation of the limestone and dolomite requires engineered drilling and blasting. At the Dixie Lee Quarry, Vulcan uses a controlled drill-and-blast methodology. All blasting activities are conducted strictly under the supervision of a state-licensed blaster, and adhering to all applicable regulations. The blasts are highly controlled, engineered events that last about a fraction of a second and occur during normal business hours.

Blasting in Tennessee is regulated by the State Fire Marshal's office under the Tennessee Blasting Standards Act, which sets requirements for procedures, limits, monitoring, record keeping and reporting. The limits follow U.S. Bureau of Mines safety standards that are scientifically proven to be safe. Scientific research has extensively shown that if the blasting activities do not produce vibration levels that exceed the limits set by the U.S. Bureau of Mines, the cosmetic damage potential (and thereby structural damage potential) from blasting is zero.

Each blast design is individually engineered to account for the geology, geometry and location. Engineers use laser profiling and digital modeling to predict specific shot behavior that is within ranges far below the permitted safety limits proven to be safe. Vulcan also makes design adjustments whenever reasonably practicable, particularly as extraction activities approach residential areas, to help provide the best possible experience for neighbors.

Drilling is conducted by in-house drillers to meet the specified design of every shot. Various technologies and methodologies are used to ensure drilling is completed to plan. Each hole is logged to document rock conditions including clay and voids that might be encountered during drilling. Blasters review all driller logs before loading each shot. Vulcan uses 3D profiling, borehole tracking and GPS-enabled drilling technologies that are employed as needed at the site, under direction of the Manager of Drilling and Blasting.

Vulcan is required to monitor each blast at a distance no farther than the closest off-site regularly occupied structure not owned or leased by Vulcan. A network of seismographs measures ground vibration and air blast overpressure and reports the data to our engineers and operations team in real-time.

Blasting operations generally occur up to 2 times per ~~week~~ month during normal business hours between 9 a.m. to 4 p.m., although this frequency is subject to adjustment based on site development needs, proximity to nearby structures, and seasonal market demand. No blasting will occur on Sundays or Federal holidays. ~~Vulcan offers phone notification to neighbors who would like to be contacted in advance of a blast.~~ Vulcan will also maintain and promote a pre-blast notification call list for neighbors opting in to receive same-day advance notification of planned blast.

Each engineered blast is monitored for vibration and air overpressure at least as close as the nearest residential structure. In addition to its existing network of seven active monitors, Vulcan will maintain five additional monitors dedicated to the Extension Area. These monitors will be scientifically placed to provide enhanced monitoring coverage and additional blasting data for neighbors along Buttermilk Road, Hickory Meadows Drive and Pittman Drive. This monitoring is performed by a third-party vibration expert consultant, and the records maintained for review upon request by the State Fire Marshal's office. Vulcan will make quarterly blasting data available for review by appointment in the Quarry Office. Vulcan's blasting results at the Existing Quarry are in full compliance with State limits and have been for many years. The Quarry Extension will be administered in accordance with the same regulations and follow the same proven operational best practices and procedures.

Vulcan will conduct standard pre-blast surveys of structures within 1,000 feet of the Extension Area offered after the completion of the vegetated screening berm (and relocated Graybeal Road) and before the first blast on the Extension Area for property owners who opt-in to the program. Vulcan will notify eligible property owners via mail to explain the procedure and provide a means of scheduling an inspection visit.

General Mining Operations

Mining activities on the Quarry Extension will be limited to berm construction and vegetation, overburden removal, and mine excavation activities that include drilling, safe blasting, loading and hauling to the Existing Quarry which hosts the processing plant, office, maintenance shop, office, product stockpiles, access driveways, tenant sites, and other associated quarry uses.

Per Knox County Code of Ordinances, Part II, Article 4.50.02, B.9, and the conditions imposed by the County in response to Vulcan's 2009 Use on Review application: (i) the construction of the berm is to be limited to the hours between 7:00 AM and 6:00 PM, Monday through Friday only; (ii) all blasting associated with the quarrying operation shall be permitted between 9:00 AM and 4:00 PM, Monday through Friday only; and (iii) all other quarry operations within the portion of the site that is zoned A (Agricultural) must be limited to the hours of 7:00 AM and 9:00 PM, Monday through Saturday. Vulcan will also require the use of low-sound backup alarms on all mobile equipment operating on the Quarry Extension, including during berm construction.

Water Quality

Water quality is regulated by the Tennessee Department of Environmental & Conservation (TDEC). Water is collected in the quarry and allowed to settle in ponds before reuse or discharge. Primary sources of water include stormwater runoff, groundwater, plant wash water, and dust suppression water. Water is treated in the Existing Quarry and discharged under permit number TN0026484. Discharge water is tested for total suspended solids and pH, per permit conditions. Spill prevention and stormwater management plans are also in place to protect water quality.

Air Quality

Air quality at the Existing Quarry is regulated under permit number 21-0138. Air quality at rock crushers, screens, and conveyor transfer points in the processing plant is controlled with water spray technology. The processing plant will remain on the Existing Quarry site, and will stay in its current location near Everett Road. Dust from existing paved and unpaved roadways is suppressed with use of a water truck. The Quarry Extension will adhere to the same regulations and procedures. See Exhibit 5.1 for more detailed information.

Reclamation

Upon completion of mining activities at the Dixie Lee Quarry, final reclamation on the Quarry Extension will consist of slope stabilization where needed to control erosion, stormwater

management and general equipment removal and cleanup. The goal of reclamation will be to leave the site in a safe, environmentally sound condition that has future land value. The specific land uses will be dependent on future needs of the area once mining is complete, which today is estimated at 50+ years in the future and based on market demand.

Dixie Lee Quarry

EXHIBIT 5.1 Safety, Health and Environmental Regulatory Oversight

Vulcan Materials Company's Dixie Lee Quarry operates in compliance with local, state, and federal regulations designed to protect public safety, employee health, and the environment. We work hard to be a good neighbor by meeting or exceeding local, state, and federal community-focused safeguards and regulatory requirements.

The Quarry Extension will be required to operate under regulations that are protective of people, land, air and water (on our site, at the property line and in the community). These include regulations and oversight from the Knox County Department of Air Quality Management, the Tennessee Department of Environment & Conservation (TDEC), the State Fire Marshal, the Mine Safety and Health Administration (MSHA), the U.S Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers (USACE). Vulcan is, and has been, in compliance with the Knox County Zoning Ordinance and the operation of the Extension will be in compliance. This exhibit provides an overview of several key regulatory requirements and the measures implemented to ensure compliance.

Blasting

The Tennessee Blasting Standards were established in 1975 to safeguard life, health and property and to promote the public welfare through the establishment of standards and regulation of the use of explosives and blasting within the State of Tennessee. Tennessee Code Annotated, Title 68, Chapter 105, establishes the requirements for blasters, handlers and firms. The **State Fire Marshal's Office (SFMO)** is charged with the duty to enforce the Blasting Standards Act. No person, firm, association, corporation, or other entity can purchase, receive, or take possession of explosives without first obtaining registration from the **Tennessee Department of Commerce and Insurance (TDCI)**. The Act requires handlers, blasters, and blasting firms to obtain a license to detonate explosives in blasting operations in the State of Tennessee. The state fire marshal oversees the registration process to ensure applicants seeking licensure are qualified.

The SFMO also has the duty to investigate blasting complaints received from the public. The fire marshal will determine if there has been a violation of the Blasting Standards Act. If a violation is found, the department may refuse to grant, or may suspend, revoke, or refuse to renew licensing, and may assess a civil penalty.

Air Permit - Dust Regulations

Vulcan holds a **Knox County Air Quality Management (KCAQM)** permit for the property under Permit 21-0138. Dust is regulated from a federal, state and local level. Fugitive dust and dust generated by blasting is regulated by our permit and the following regulations. The federal **National Ambient Air Quality Standards (NAAQS)** sets air quality standards under the Clean Air Act and codified in 40 CFR 50. The **U.S Environmental Protection Agency (US EPA)** approved Tennessee's State Implementation Plan (SIP) for the state's rules for air quality.

The regulations that govern fugitive dust at Vulcan's facility are KCAQMR Sections 22.3 and 24.3 and TAPCR 1200-03-05-.01(1). The operation is also regulated by KCAQMR Sections 17.1 and 17.3 and TAPCR 1200-03-09-.03(8) and 40 CFR 60 Subpart OOO for dust emissions from the fixed equipment, roadways and stockpiles.

We use water trucks on haul roads and stockpiles, as well as water-suppression systems throughout the production plant (crushers, screens, and conveyor transfer points) to minimize dust emissions. Site personnel inspect these areas and dust-control equipment at least daily to verify their effectiveness and ensure compliance with air permit requirements and applicable regulations.

Safety

The **U.S. Mine Safety and Health Administration (MSHA)** regulates safety at open-pit limestone mines through comprehensive federal standards covering blasting, ground stability, highwall safety, mobile equipment operation, air quality, dust control, workplace examinations, emergency preparedness, and miner training. The MSHA Mine ID for Dixie Lee Quarry is 40-01427. MSHA provides independent federal oversight through regular, unannounced inspections of mining operations. Inspectors routinely inspect mine sites and have authority to issue citations and corrective actions to ensure compliance and protect worker safety. If a safety or health issue is identified, MSHA has the authority to require corrective action, issue citations, assess penalties, and, when necessary, stop work until the condition has been addressed.

Health

Miner health and safety are supported by the **U.S. Mine Safety and Health Administration (MSHA)** and the **National Institute for Occupational Safety and Health (NIOSH)**. MSHA establishes and enforces mandatory mine safety and health standards through inspections, compliance reviews, and enforcement actions, while NIOSH conducts independent research to identify hazards and develop science-based solutions that improve mining safety and health.

Health Continued

MSHA's silica standard (30 CFR Part 60) regulates workplace silica exposure through air monitoring, exposure limits, dust-control measures, respiratory protection requirements, and medical surveillance programs. Silicosis is an occupational disease caused by prolonged over-exposure to respirable crystalline silica dust in the workplace. Because it is preventable but irreversible, MSHA requires mining operations to monitor and control silica exposures to protect worker health. Limestone at the Dixie Lee Quarry contains less than 5% silica, making it a relatively low-silica material compared with many other rock types.

To ensure compliance with these standards, Vulcan conducts employee exposure monitoring through workplace sampling and exposure assessments. The program also includes mandatory and voluntary medical examinations performed by qualified healthcare providers to help protect miner health and identify potential respiratory concerns at an early stage.

Erosion Prevention and Sediment Control

Erosion prevention and sediment control measures are regulated by the **Tennessee Department of Environment and Conservation (TDEC)** through the state's NPDES permitting program. Facilities must identify potential sources of erosion and prevent sediment from leaving the site and impacting nearby waterways. Vulcan designs BMP controls with Professional Engineer, submits the plan to TDEC as part of the NPDES permit application and TDEC approves the controls with the issuance of the permit. These measures are installed, inspected, and maintained in accordance with TDEC requirements in Vulcan's NPDES permit (TN0026484) and the Tennessee Erosion Prevention and Sediment Control Handbook.

Streams & Wetlands

If unavoidable impacts to streams or wetlands are necessary, Vulcan is regulated by the **US Army Corps of Engineers (USACE)** and the **TDEC**. We follow the process of getting a jurisdictional determination of all water features onsite, submitting the report to both agencies and receiving their concurrences. These concurrences allow Vulcan to determine which features would be necessary to impact or avoid. If features can be avoided, we go above the TDEC-recommended buffer distance of 30-feet and use a 50-foot buffer. If Vulcan plans on impacting a feature, Vulcan follows the permitting process of USACE and TDEC prior to impacting the feature.

Water Discharge

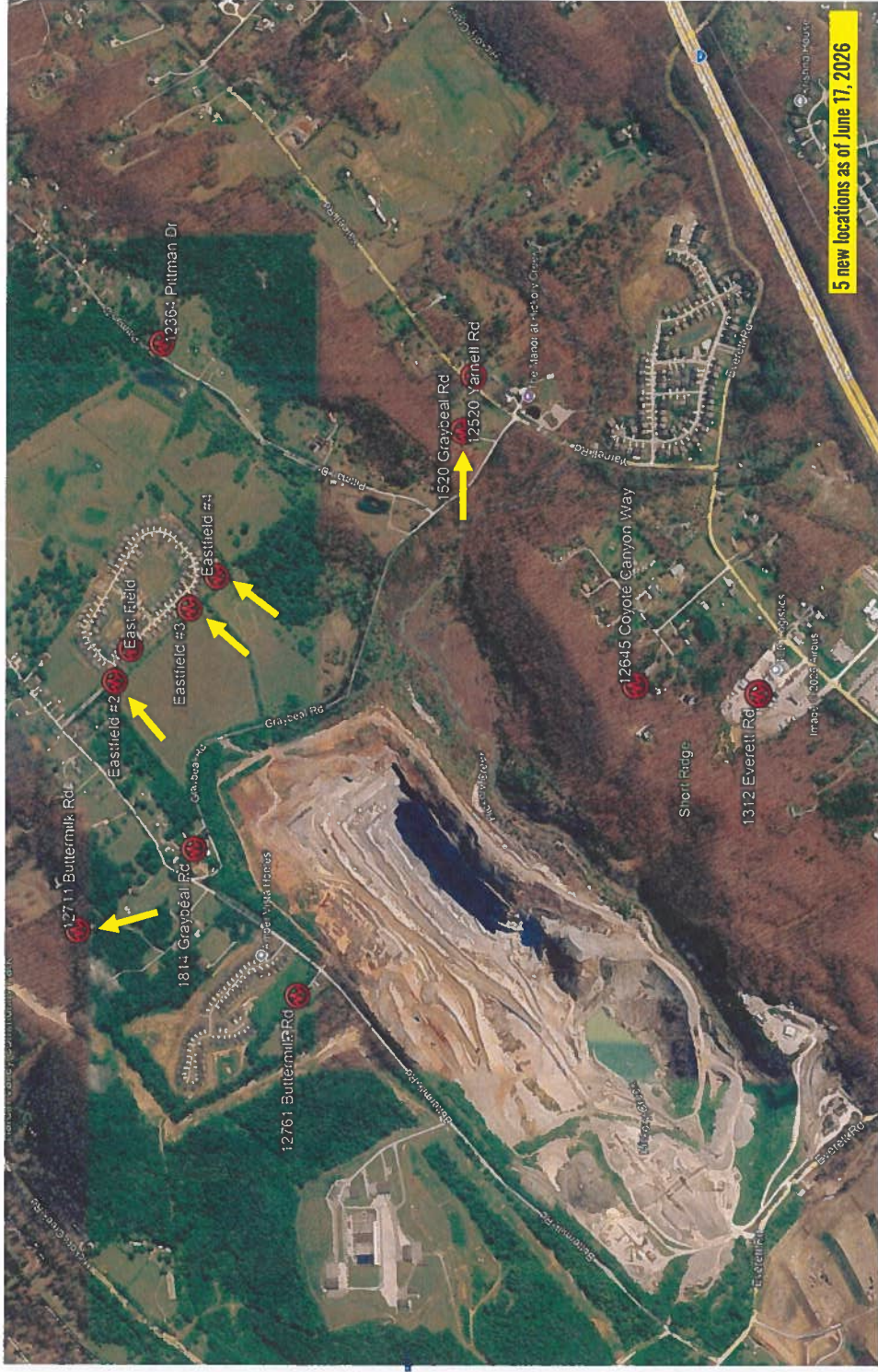
Vulcan currently holds a National Pollutant Discharge Elimination System (NPDES) water permit issued by **TDEC**. The permit number is TN0026484 and is regulated under TAPCR 0400-40-05. The water discharge point is inspected at least daily, and water samples are collected twice monthly to ensure state water quality as required in Vulcan's permit.

Sinkholes

Vulcan holds an Aquatic Resource Alteration Permit (ARAP) NR18MS.01 issued by **TDEC Division of Water Resources**. The regulations cover activities that may affect streams, wetlands, and other waters of the state. The permitting process is designed to protect water quality and aquatic resources by requiring project-specific review, avoidance and minimization of impacts, and mitigation where appropriate. Vulcan's permit authorizes activities associated with addressing naturally occurring sinkholes that have historically formed along Hickory Creek and Grable Branch downstream of the quarry near the Everett Road entrance. The permit under TAPCR 0400-40-07 allows Vulcan to repair sinkholes to maintain stream flow in the two creeks.

Our blasting is regulated by the State of Tennessee as part of our mining permit which sets requirements for procedures, limits, monitoring, record keeping and reporting. The limits follow U.S. Bureau of Mines safety standards that are scientifically proven to be safe.

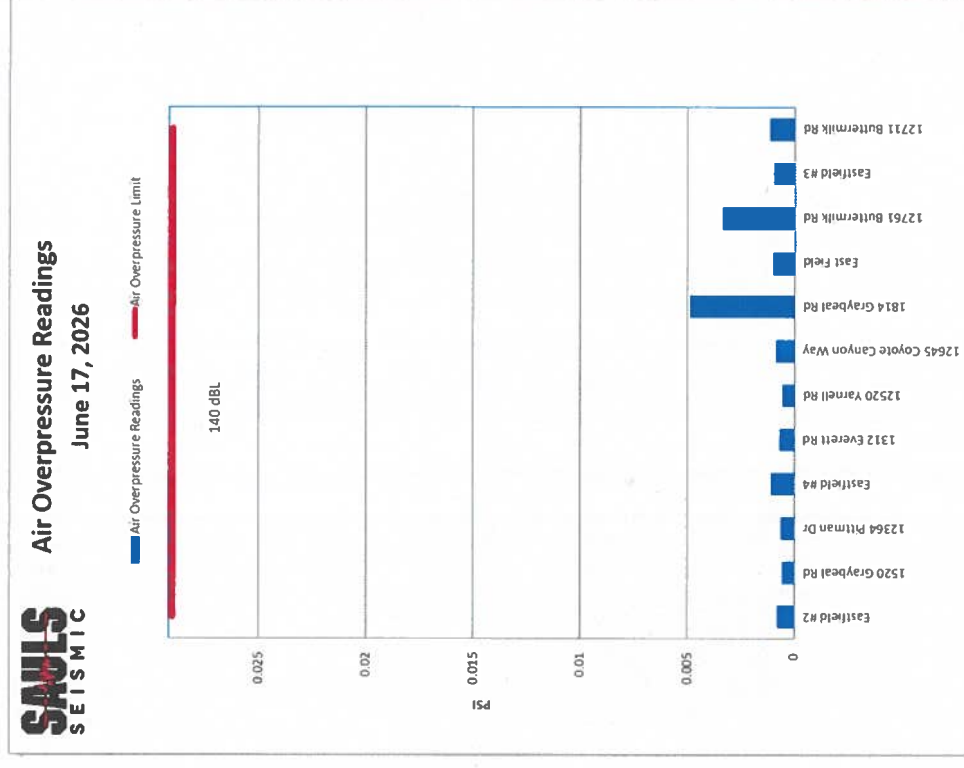
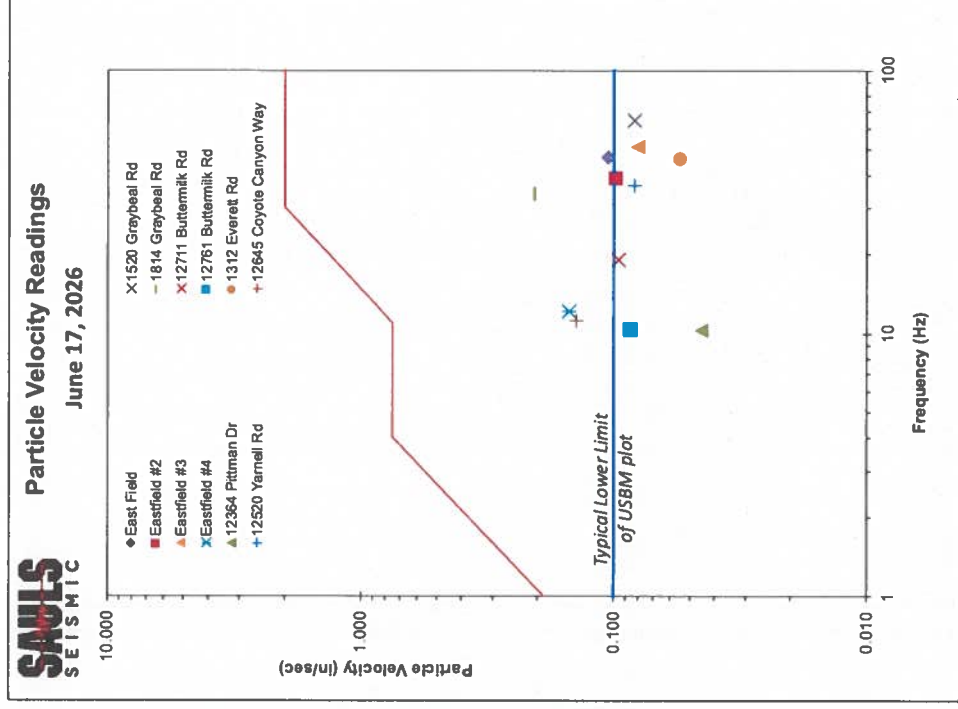
- We are required to monitor each blast at a distance no farther than the closest off-site regularly occupied structure not owned or leased by Vulcan.
- Our network of 12 seismographs measure ground vibration and air blast overpressure and report the data to our engineers and operations team in real-time.



5.2 SAFE BLASTING REGULATION AND INDEPENDENT MONITORING DATA

Our blasts are highly controlled, engineered events that last about a fraction of a second and occur during normal business hours.

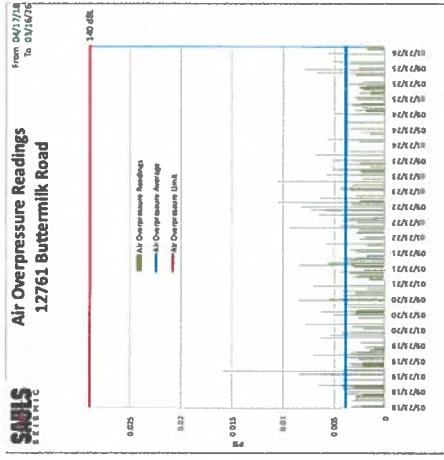
These two graphs show data from all active seismographs (existing and newly installed) from our June 17 blast



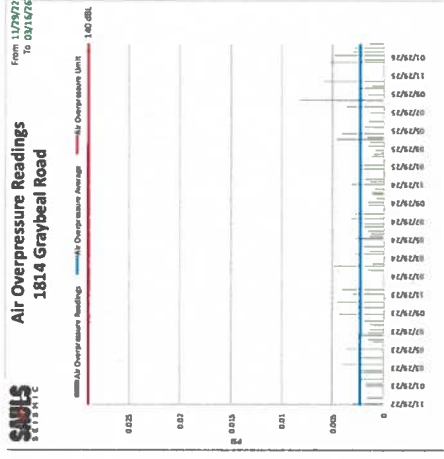
100% compliance.

6/17 BLAST DATA

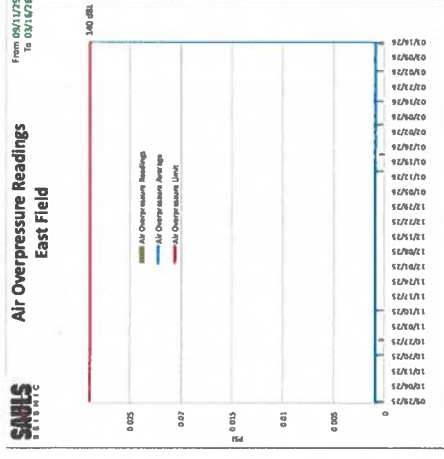
Each blast is individually engineered to account for the geology, geometry and location. Our engineers use laser profiling and digital modeling to predict specific shot behavior that is within ranges far below the permitted safety limits proven to be safe.



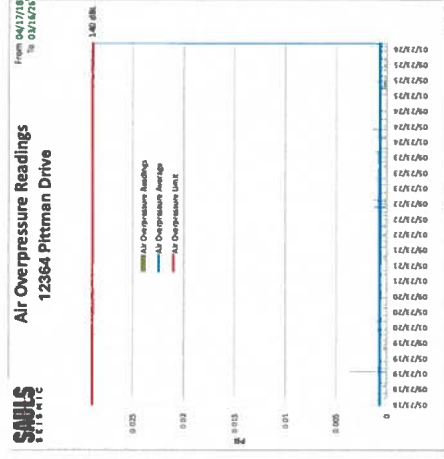
Permit Limit: 140.0
Average: 122.3



Permit Limit: 140.0
Average: 113.6



Permit Limit: 140.0
Average: 109.3

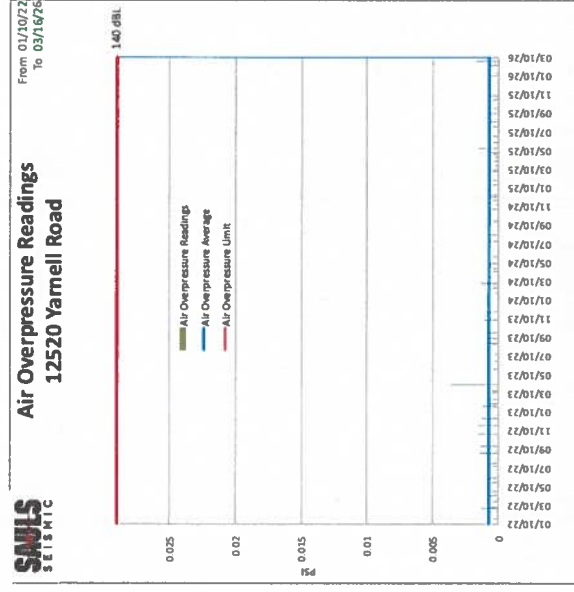


Permit Limit: 140.0
Average: 107.5

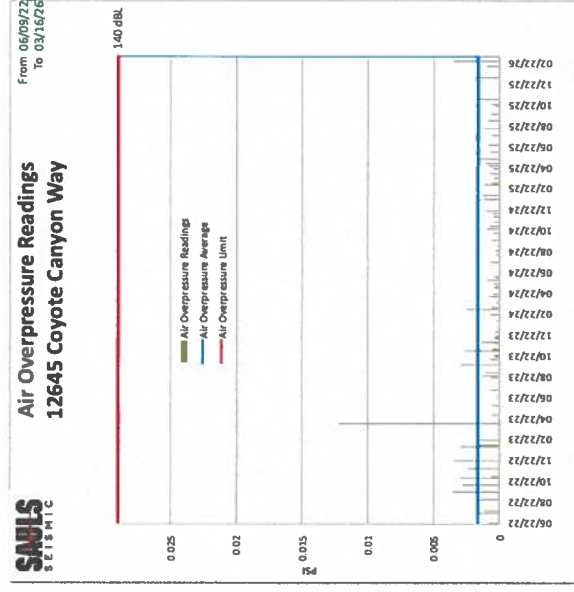
We are required to be below the **red** line.

AIR OVERPRESSURE READINGS (ACTIVE MONITORS)

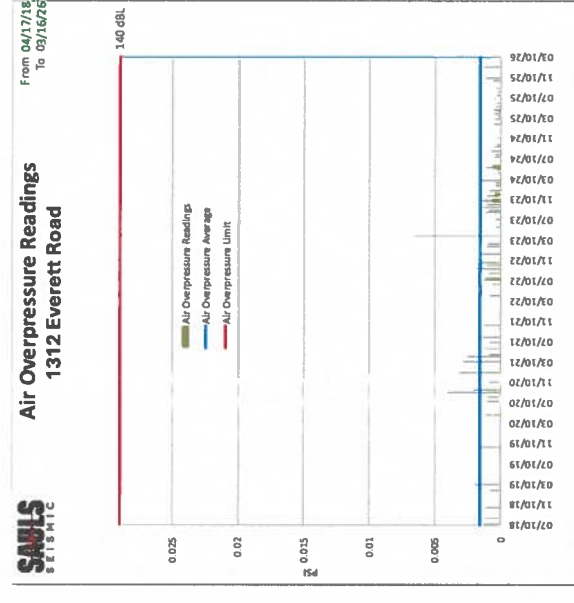
Each blast is individually engineered to account for the geology, geometry and location. Our engineers use laser profiling and digital modeling to predict specific shot behavior that is within ranges far below the permitted safety limits proven to be safe.



Permit Limit: 140.0	Average: 107.5
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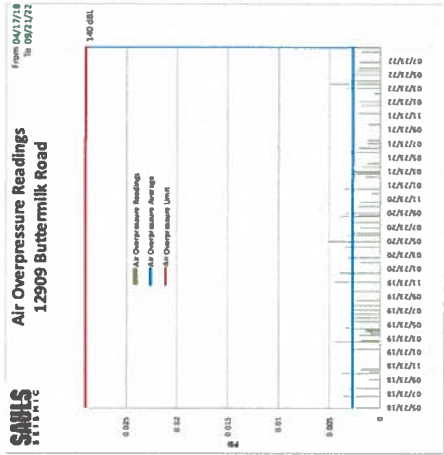
Permit Limit: 140.0
Average: 111.6



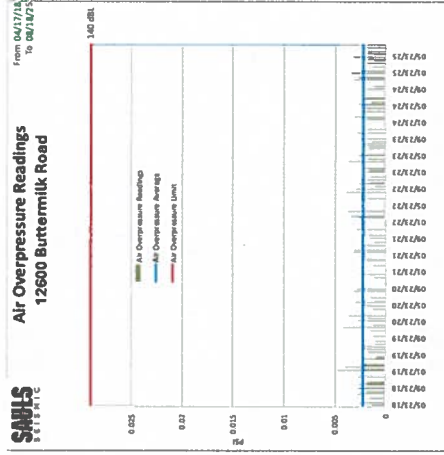
Permit Limit: 140.0
Average: 111.0

We are required to be below the **red** line.

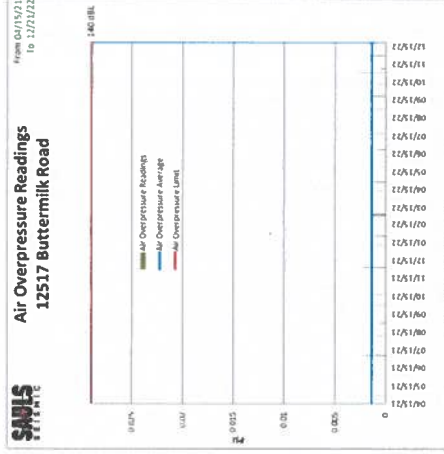
Each blast is individually engineered to account for the geology, geometry and location. Our engineers use laser profiling and digital modeling to predict specific shot behavior that is within ranges far below the permitted safety limits proven to be safe.



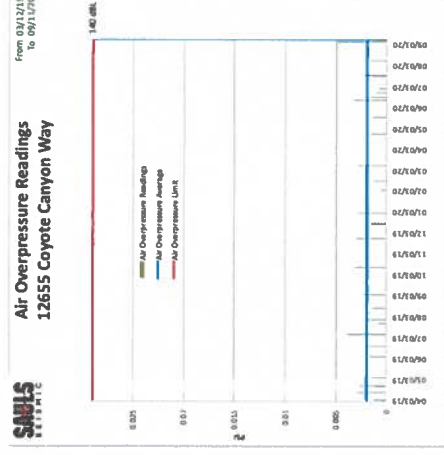
Permit Limit: 140.0
Average: 118.7



Permit Limit: 140.0
Average: 117.4



Permit Limit: 140.0
Average: 113.6

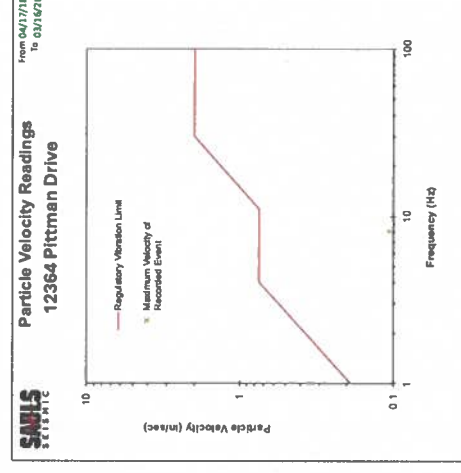
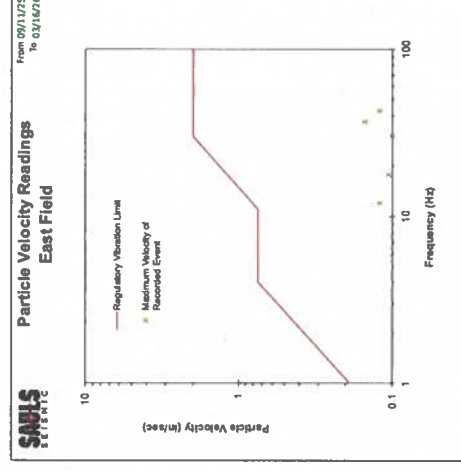
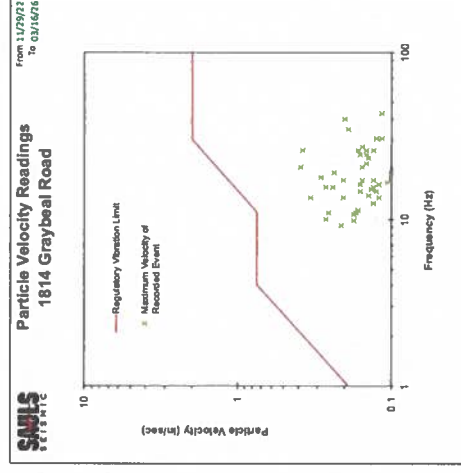
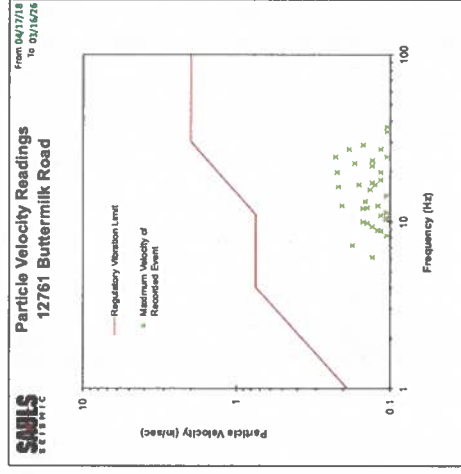


Permit Limit: 140.0
Average: 116.3

We are required to be below the red line.

AIR OVERPRESSURE READINGS (INACTIVE MONITORS)

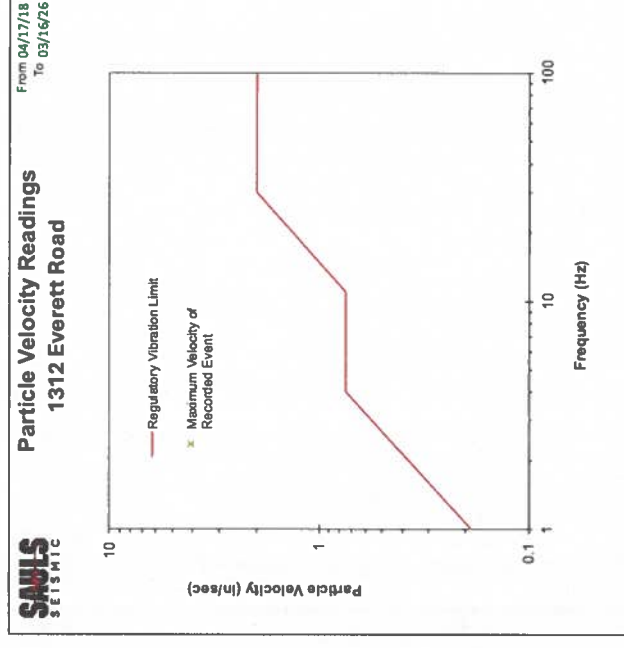
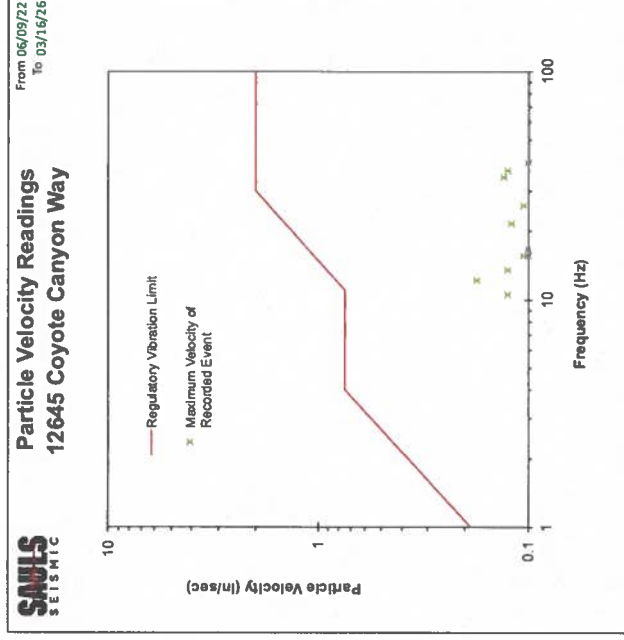
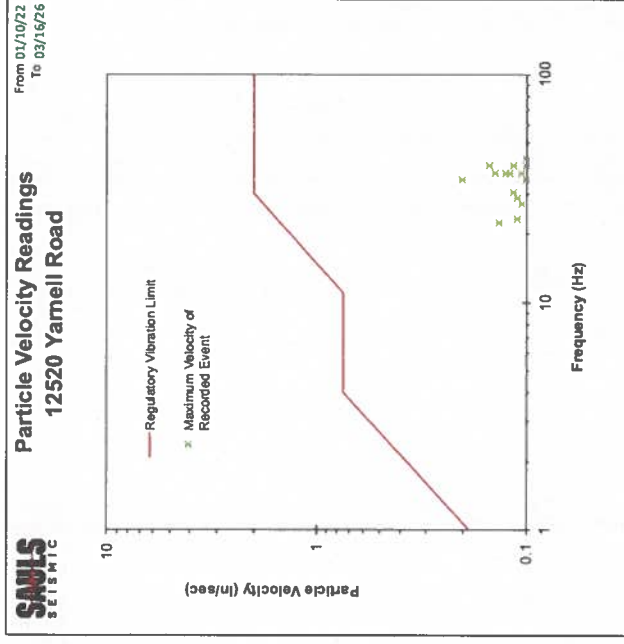
Scientific research has extensively shown that if the blasting activities do not produce vibration levels that exceed the limits set by the U.S. Bureau of Mines, the cosmetic damage potential (and thereby structural damage potential) from blasting is zero.



We are required to be below the **red** line.

VIBRATION READINGS (ACTIVE MONITORS)

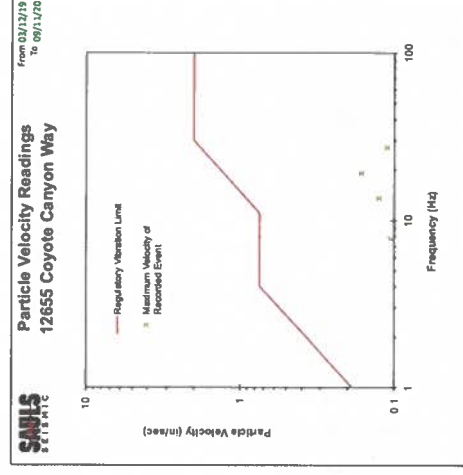
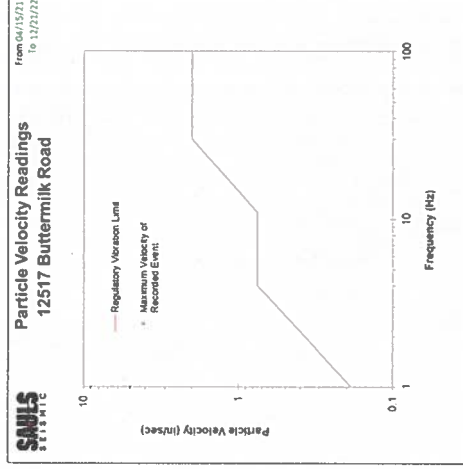
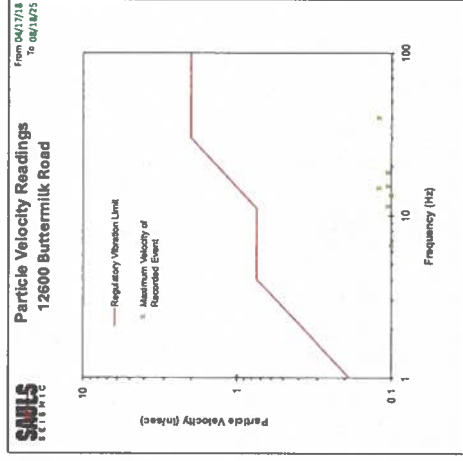
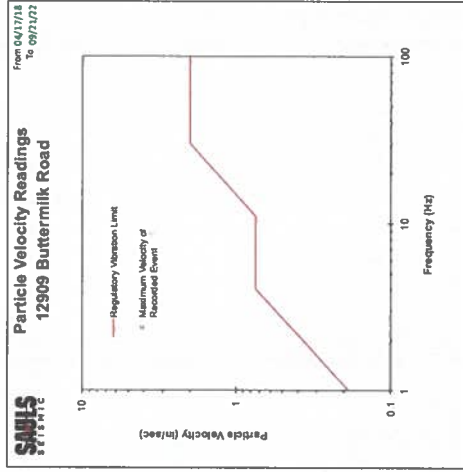
Scientific research has extensively shown that if the blasting activities do not produce vibration levels that exceed the limits set by the U.S. Bureau of Mines, the cosmetic damage potential (and thereby structural damage potential) from blasting is zero.



We are required to be below the **red** line.

VIBRATION READINGS (ACTIVE MONITORS)

Scientific research has extensively shown that if the blasting activities do not produce vibration levels that exceed the limits set by the U.S. Bureau of Mines, the cosmetic damage potential (and thereby structural damage potential) from blasting is zero.



We are required to be below the **red** line.

VIBRATION READINGS (INACTIVE MONITORS)

Proposed Permitted Area (Parcel 129 08001)

Metes and Bounds Description

TRACT III: BEGINNING at an iron pin in the Northern or Northeastern right of way of Graybeal Road, a distance of 497.70 feet, more or less, along said right of way line in a northwesterly direction from its point of intersection with the centerline of Pittman Road; thence with the right of way of said Graybeal Road the following calls: along a curve to the left having a chord of N. 66-54 W. for 262.94 feet to a point; thence N. 78-08 W. for 224.84 feet to a point; thence N. 72-31 W. for 469.91 feet to a point; thence along a curve to the right having a chord of N. 46-22 W. for 337.70 feet to an iron pin, being a corner with Jack Truitt; thence with Jack Truitt N. 69-48 E. for 524.04 feet to an iron pin; thence with Jack Truitt N. 57-17 E. for 773.00 feet to an iron pin, being a common corner with Jack Truitt and Edward Bryant; thence with Bryant and with a fence S. 42-52 E. for 889.44 feet to an iron pin, being a common corner with Bryant and Dunaway; thence with Dunaway and with a fence S. 51-34 W. for 756.60 feet to the point of beginning and containing 23.11 acres by the survey dated February 15, 1989 of Sizemore-Lynch and Associates.

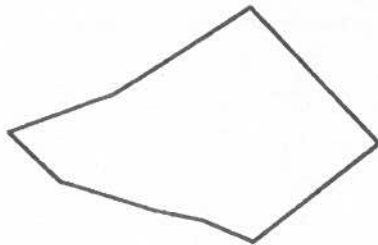
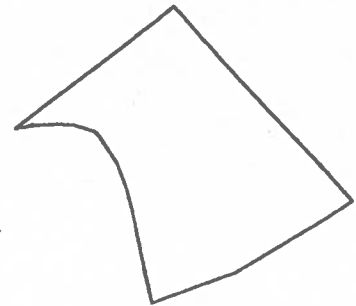


EXHIBIT 7.0

Proposed Permitted Area (Parcel 129 080)
Metes and Bounds Description

TRACT II: BEGINNING at an iron pin located in the Northern or Northeastern right of way of Graybeal Road, a distance of 1,793.09 feet, more or less, along said right of way line in a northwesterly direction from its point of intersection with the centerline of Pittman Road, said pin being a corner with Richard Truitt; thence with the right of way of said Graybeal Road the following calls: along a curve to the right having a chord of N. 15-51W. for 58.16 feet to a point; thence N. 11-30 W. for 496.84 feet to a point; thence N. 15-17 W. for 203.07 feet to a point; thence N. 23-36 W. for 172.02 feet to a point; thence N. 40-34 W. for 142.95 feet to a point; thence N. 71-25 W. for 128.24 feet to a point; thence N. 88-19 W. for 178.09 feet to a point; thence S. 79-24 W. for 155.77 feet to an iron pin; thence leaving the right of way of Graybeal Road and continuing N. 51-46 E. for 229.78 feet to an iron pin, being a corner with Sims; thence with Sims N. 51-50 E. for 263.50 feet to an iron pin, being a common corner with Sims and Bowerman; thence with Bowerman N. 52-32 E. for 124.52 feet to an iron pin; thence N. 52-32 E. for 124.51 feet to an iron pin, being a common corner with Bowerman and Perry; thence with Perry N. 52-01 E. for 119.91 feet to an iron pin, being a corner with Perry and Lamans; thence with Lamans N. 52-36 E. for 123.70 feet to an iron pin, being a corner with Lamans and Sims; thence with Sims N. 51-26 E. for 170.74 feet to an iron pin, being a corner with Sims and Bryant; thence with Bryant and with a fence S. 41-45 E. for 1,522.05 feet to an iron pin, being a corner with Bryant and Richard Truitt; thence with Richard Truitt S. 57-17 W. for 773.00 feet to an iron pin; thence S. 69-48 W. for 524.04 feet to the point of beginning and containing 33.56 acres by the survey dated February 15, 1989, by Sizemore-Lynch and Associates.



OVERVIEW

To help meet the area's infrastructure and construction needs, we propose investing \$27+ million to activate ~60 acres along Graybeal Road (owned since 1989) for a Quarry Extension that will support a strong Knox County.

The extension will only be accessible internally via the existing quarry and will not create additional demand for our aggregates, nor will it increase customer truck traffic.

Key Features

- Will be used exclusively for stone extraction
- No public access to the extension area
- No permanent buildings, structures, fixed production equipment, or lighting
- Will not increase production or customer traffic
- Significant vegetated screening berm
- Exceeds County safe buffer for mining by 125%

We are working with Knox County and stakeholders on a Graybeal Road realignment solution to maintain community mobility.

The extension is designed and will be operated to meet or exceed all state and federal requirements and regulations that are protective of safety, health, and the environment.

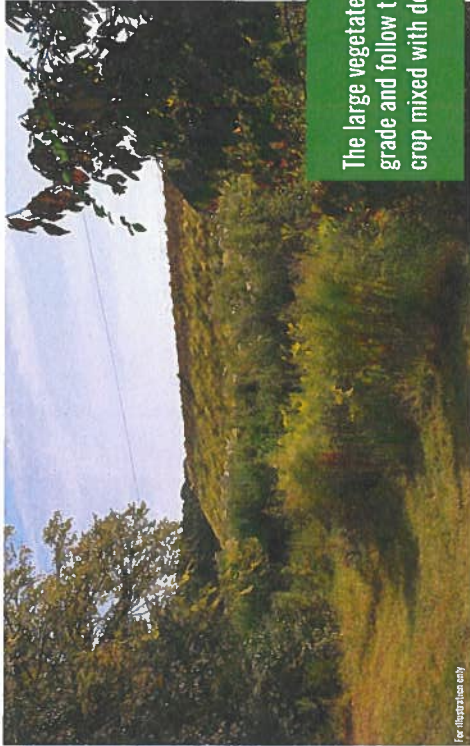
60% of the Extension Area is reserved for buffer, setback, vegetation, berms and a new Graybeal Road

Total Project Area | ~61.4 acres (including Graybeal Road segment)



R 8.0 QUARRY EXTENSION OVERVIEW & BUFFER AND SCREENING PLAN (R. 7/8)

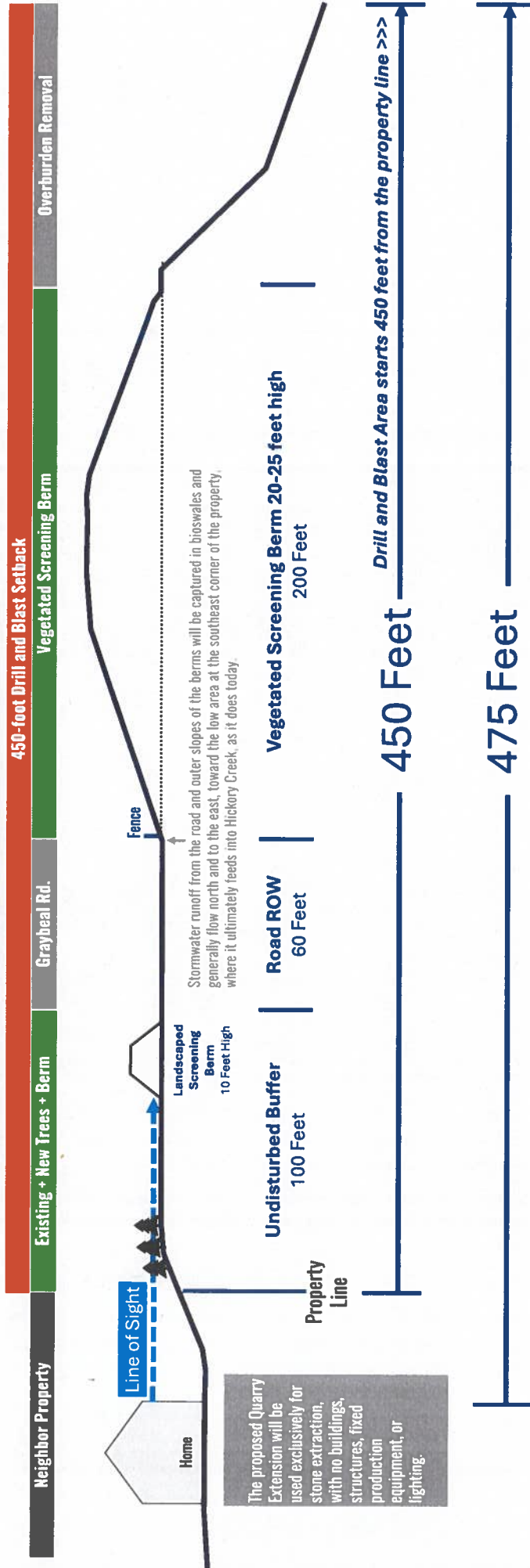
Consistent with the current quarry operations, the extension area will be screened by vegetated berms.



This conceptual view from Hickory Meadows Drive shows the general elevation of Hickory Meadows in relation to the neighboring Vulcan property that was acquired in 1989. Most of the existing trees within the 100-foot buffer will remain. Vulcan will augment the existing vegetation with a 15-foot Type A landscape area. And a 10-foot high screening berm.

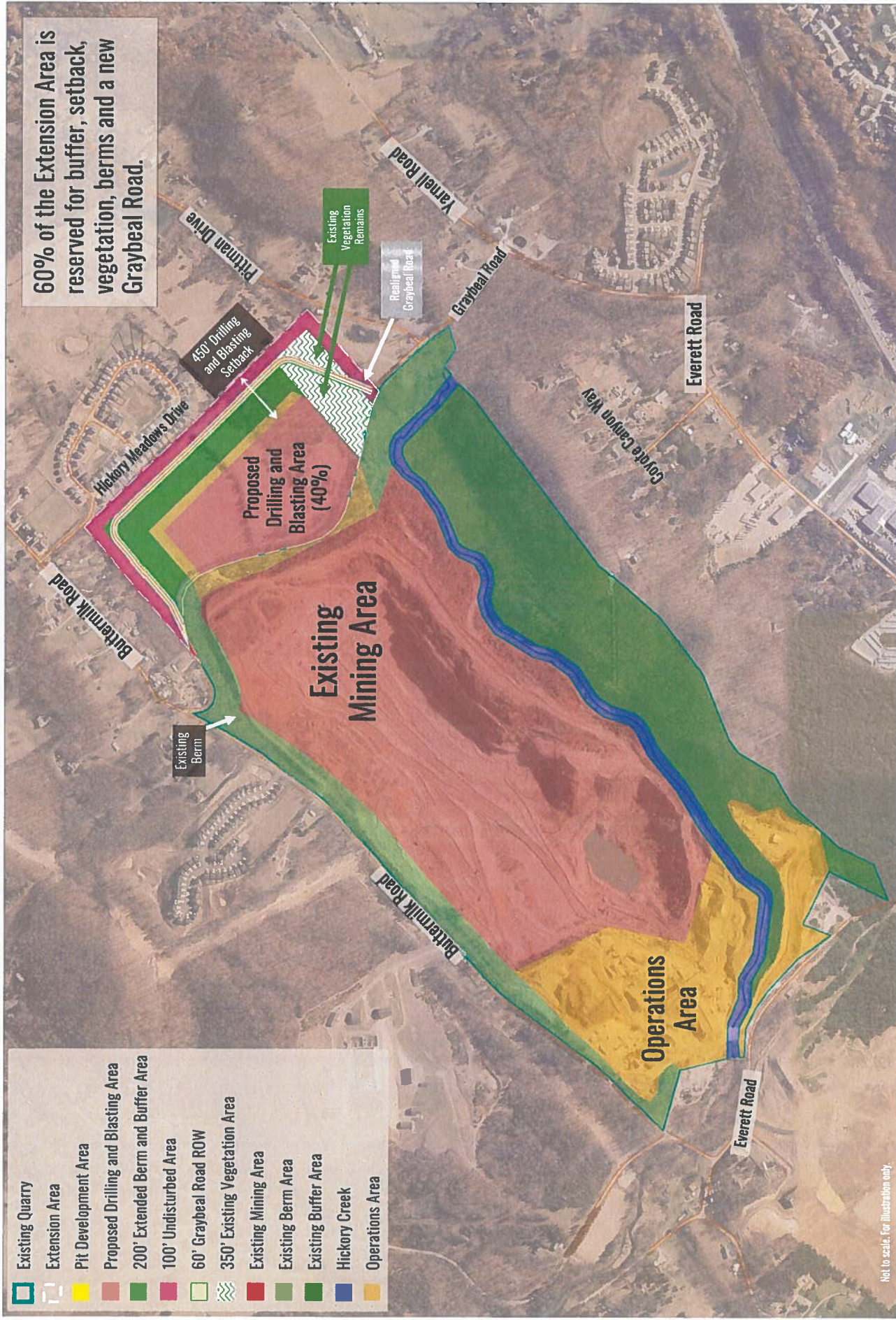
Vulcan will construct a 20-25 foot high vegetated screening berm along the Buttermilk Rd. and Hickory Meadows Dr. sides of the Extension, with existing wetlands and vegetation serving as a buffer on the Pittman Dr. side. The entire Extension will be fenced.

The large vegetated screening berm will be approximately 20-25 feet high above grade and follow the existing topography. It will be planted with fast-growing nurse crop mixed with deep rooted perennial grasses, native grasses and wildflowers.

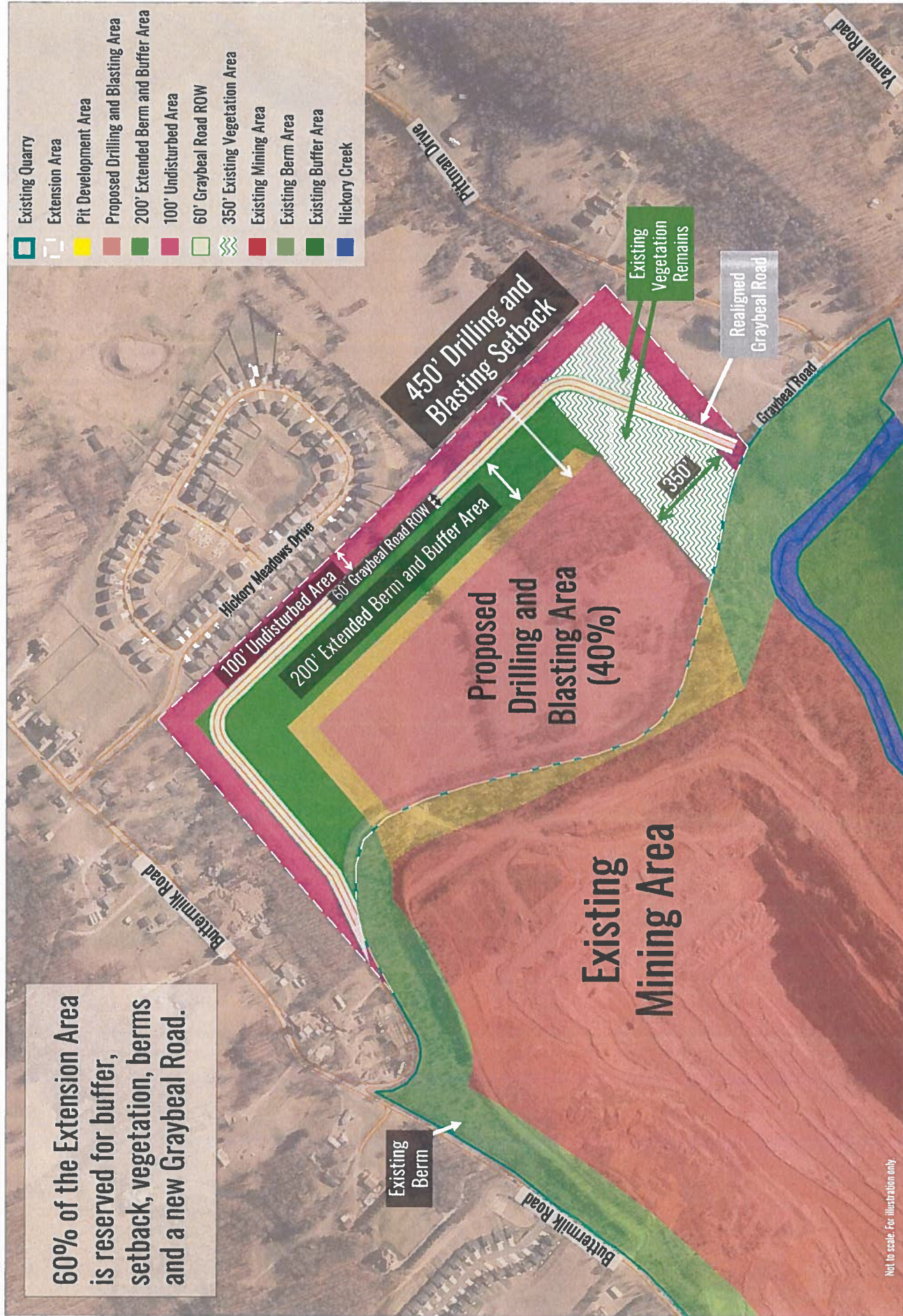


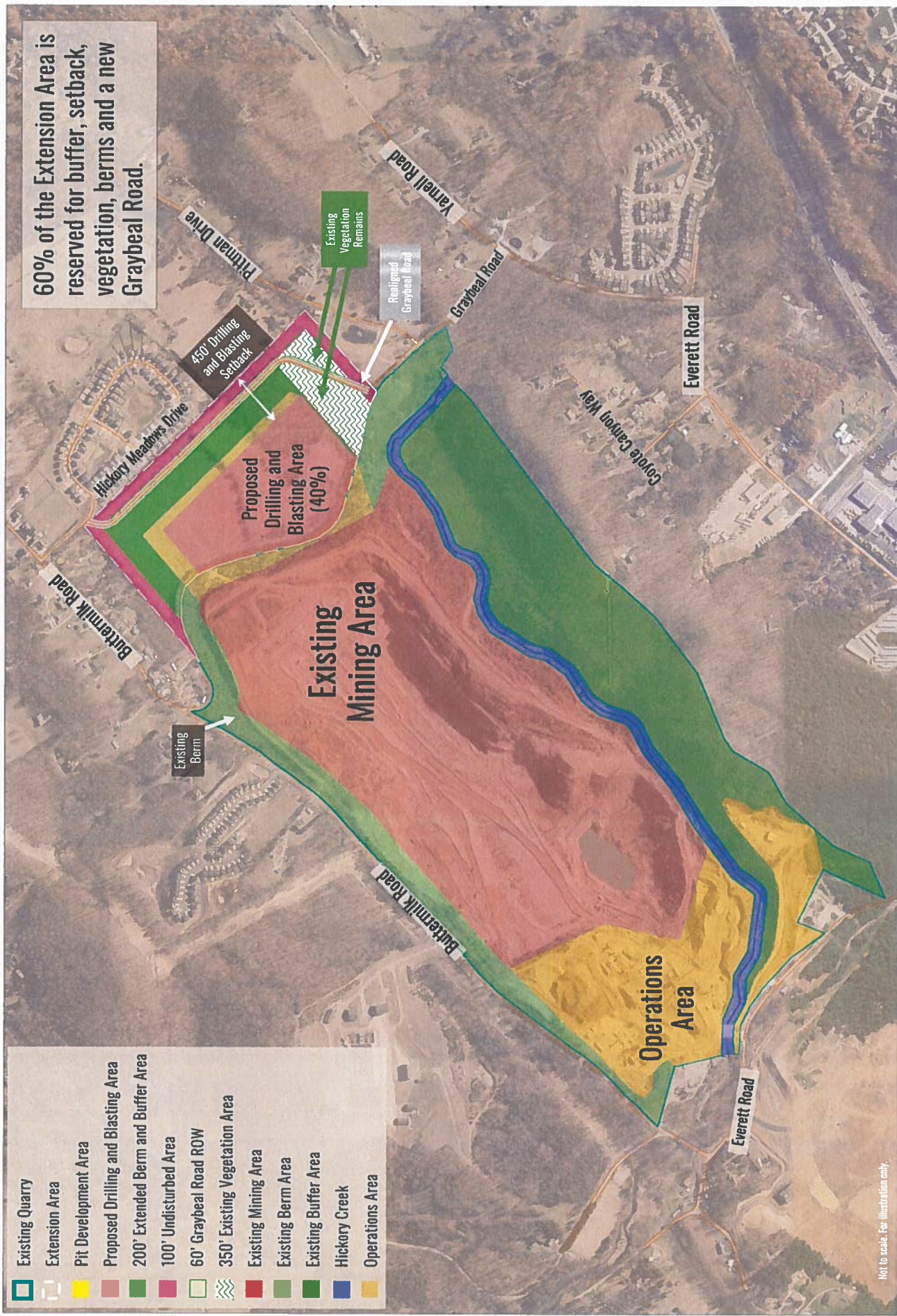
BUFFER AND SCREENING PLAN (R. 7/8)

Perspective from Hickory Meadows Drive



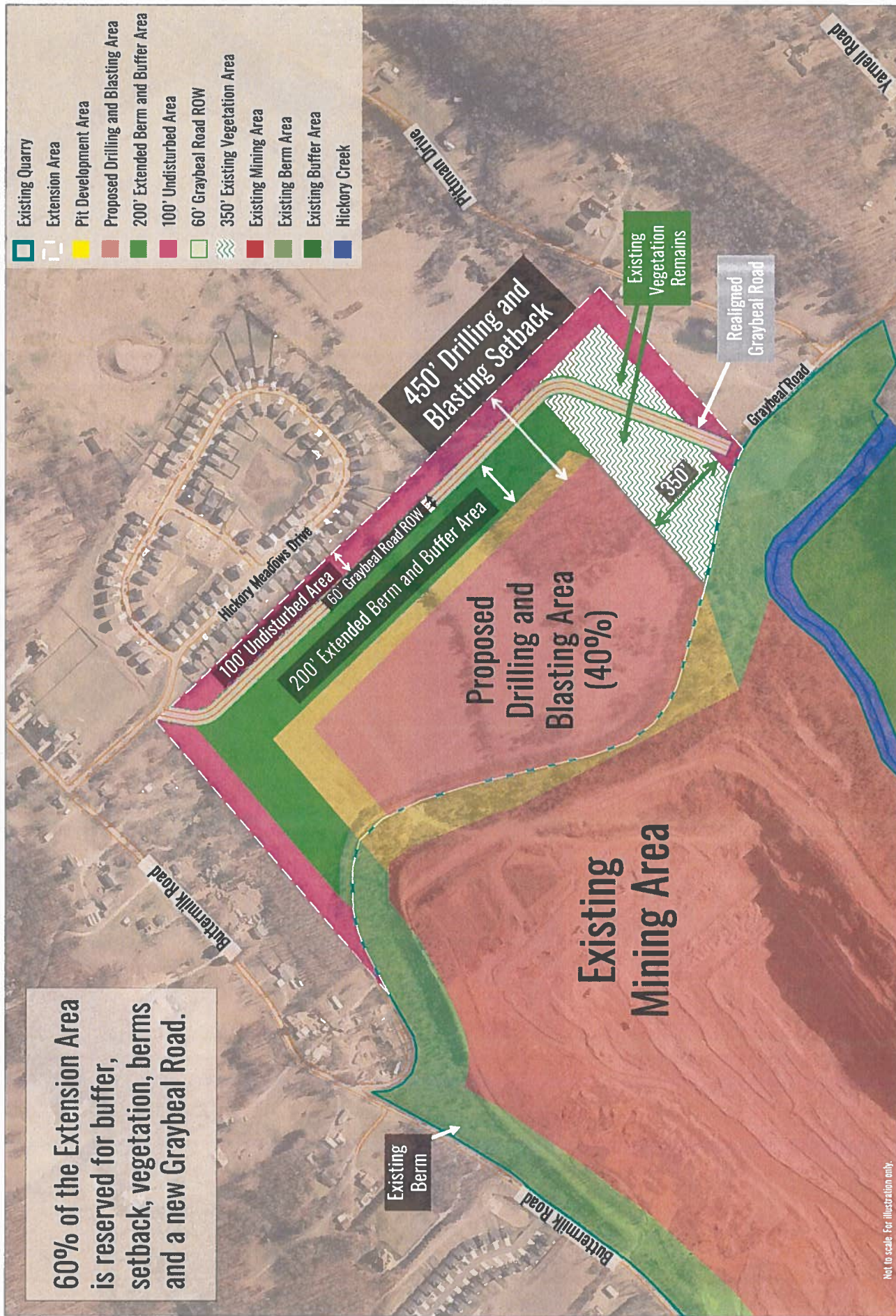
CONCEPT SITE PLAN A: Buttermilk Connection (R. 7/8)





60% of the Extension Area is reserved for buffer, setback, vegetation, berms and a new Graybeal Road.

CONCEPT SITE PLAN B: Hickory Meadows Connection (R. 7/8)



CONCEPT SITE PLAN B: Hickory Meadows Connection (R. 7/8)

ATTACHMENT 2



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EDWARD G. PHILLIPS
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August 3, 2026

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Via Email

**Re: Vulcan Use on Review Application – Dixie Lee Quarry Extension Project
Knox Planning Case # 7-B-26-UR**

Dear Chris,

This will follow up on the continuing discussion that occurred at the meeting on July 28, 2026 between Vulcan representatives and several representatives of your firm's client CARE. Vulcan appreciated the participation of your client's representatives, as well as of you and Mr. Finnan, in the exchange of thoughts and concerns about the proposed extension of the Dixie Lee Quarry.

Of course, most of the discussion at this most recent meeting centered upon a review of CARE's list of Requested Conditions. I would make the following points on behalf of the Vulcan team:

- Several of the items on CARE's list are already stated as part of Vulcan's Plan of Operations.
- Nearly half of the items are already part of Vulcan's standard way of operating at Dixie Lee and are under the purview of local, state, or federal agencies with safety and environmental oversight authority.
- It appears that even if Vulcan agreed with every condition that CARE has requested neither it nor its leadership would support Vulcan's Use on Review Application.

Vulcan's Plan of Operations is well within regulatory requirements and includes significant safety and protective margins that exceed the regulations that are determined to be protective of safety, health

and the environment. Nonetheless, as a matter of good faith and to provide neighboring property owners with additional assurance, Vulcan has agreed to self-impose substantial additional protective measures designed to minimize *potential* impacts and provide additional benefits to the surrounding property owners. Although it is not able to adopt CARE's Requested Conditions in their entirety, Vulcan has reconsidered several of the requests and is willing to incorporate certain additional measures into its operations. In total, these and other conditions have added more than \$7 million to the \$20 million project.

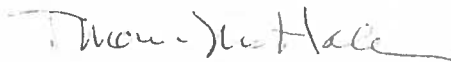
Vulcan will modify its conditions to increase the drilling and blasting setback from the back of lots (surveyed property line) fronting on Hickory Meadows Drive from 450-feet to 500-feet, provide for a more extensive pre-blast notification system for neighbors, tighten up allowed times for blasting operations, increase the height of the 200-foot wide berm from 20-25 feet to 25-30 feet, plant evergreen trees along the crest of the large vegetative berm to increase screening and double the depth of the Type A landscaping required in the 100-foot undisturbed buffer from 15-feet to 30-feet.

The details of the conditions that Vulcan has proposed and are submitting to be conditions on an approval of its Use on Review Application are set forth on the attached **Attachment 2: Summary of Modified and Additional Conditions (updated 8-3-2026)**.

In closing, this has been a productive process in which no party can realistically expect to achieve *every* desired outcome. Practical limitations exist, and the result is a thoughtful, balanced plan that appropriately considers the interests of all parties, including neighbors and stakeholders who are not represented exclusively by CARE. My client is your neighbor today and intends to remain a good neighbor for years to come. They will continue to be responsive to questions, feedback, and concerns, and remain committed to engaging constructively with all members of the community.

Please feel free to contact me if you have any questions.

Yours truly,



Thomas M. Hale

TMH/tnm
Attachment

cc: Knox Planning Staff
Knox Planning Commissioners
Knox County Commission
Mike Reynolds, Knox Planning
Carol Landrum
Brandon Bournes
Joshua Robbins

Attachment 2:
Summary of Modified and Additional Conditions
(Updated 8-3-2026)

Based on feedback received through CARE and ongoing conversations with neighboring property owners, including the July 28, 2026 meeting with CARE representatives, Vulcan Materials Company has agreed to revise three (3) of the eight (8) conditions outlined in the July 2, 2026 Staff Report and add two (2) new conditions, as detailed below. Collectively, these commitments go beyond applicable local, state, and federal regulatory requirements and reflect Vulcan's continued efforts to address community feedback and concerns.

Note: Underline = new text. ~~Strikethrough~~ = deleted text.

1. **Additional berm along a realigned Graybeal Road:** Vulcan will construct a landscaped berm (small berm) (approximately 10 feet high) within the 100-foot undisturbed buffer adjacent to the right-of-way of the new Graybeal Road.
2. **UPDATE: Quarry Extension and drilling and blast setback 125% beyond the County requirement:** Vulcan will maintain the following ~~a 450-foot~~ drilling and blasting setbacks from the back of lots fronting on Buttermilk Road (450 feet), Hickory Meadows Drive (500 feet) and Pittman Drive (450 feet).
3. **Expanded Vibration Monitoring Network (+5 monitors dedicated to the Extension neighbors):** In addition to its existing network of seven (7) active vibration monitors, Vulcan will maintain five (5) additional monitors dedicated to the Extension Area. These monitors will be scientifically placed to provide enhanced monitoring coverage and additional blasting data for neighbors along Buttermilk Road, Hickory Meadows Drive and Pittman Drive. All monitors will continue to be maintained, and data collected by an independent third-party technical consultant.
4. **Transparent Blasting Data:** Vulcan will make quarterly blasting data available for review by appointment in the Quarry Office.
5. **UPDATE: Neighbor Pre-Blast Notifications:** Vulcan will maintain and promote an opt-in pre-blast notification call list for neighbors. Participants will receive two (2) notifications for each planned blast: 1) an advance notice indicating that blasting is anticipated during the following week; and 2) a same-day notification provided within approximately one (1) hour prior to the planned blast.
6. **UPDATE: Blasting operations:** Blasting operations will be scheduled (day of week and time) based on site development requirements, proximity to nearby structures, and seasonal market demand, and are generally anticipated to occur up to two (2) times per month; provided, however, that blasting shall not exceed ten (10) occurrences in any calendar month. Blasting will occur between 9 a.m. to 4 p.m. Monday through Friday except when U.S. Mine Safety and Health Administration (MSHA) regulations dictate otherwise. No blasting will occur on Federal holidays.

~~Blasting operations will generally occur up to 2 times per month, as opposed to 1 2 times per week, between 9 a.m. to 4 p.m., although this frequency is subject to adjustment based on site development needs, proximity to nearby structures, and seasonal market demand. No blasting will occur on Sundays or Federal holidays.~~

7. **Low-Sound Back-up Alarms:** Vulcan will require the use of low-sound backup alarms on all mobile equipment operating on the Quarry Extension, including during berm construction.
8. **NEW: Expanded Landscape Buffer at Property Line:** Most of the existing trees within the 100-foot buffer will remain and Vulcan will augment the existing vegetation with a 30-foot (previously 15-feet) Type A landscape area.
9. **NEW: Higher Screening Berm:** Vulcan raise the height of the large vegetated screening berm from 20-25 feet high to 25-30 feet high along the Buttermilk Road and Hickory Meadows Drive sides of the Extension
10. **NEW: Enhanced Screening:** Vulcan will plant evergreen trees along the crest of the large vegetated screening berm on the Buttermilk Road and Hickory Meadows Drive sides of the Extension. The planting will consist of two (2) staggered rows of evergreen trees. Trees will be spaced twenty (20) feet apart within each row, providing an effective spacing of one (1) tree every ten (10) feet when measured across the staggered rows.

Design Guidelines

Landscape Screening

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.

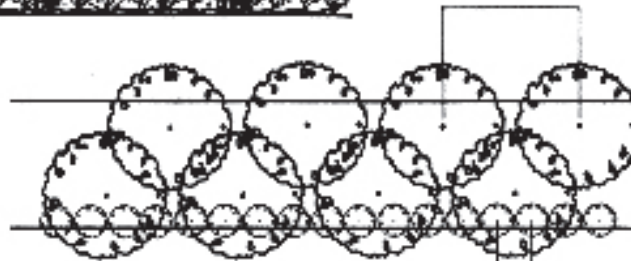
- Two offset rows of deciduous or evergreen canopy trees with a 6 ft. high continuous dense evergreen hedge, fence, wall or earth berm

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

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



Maximum 16' Centers



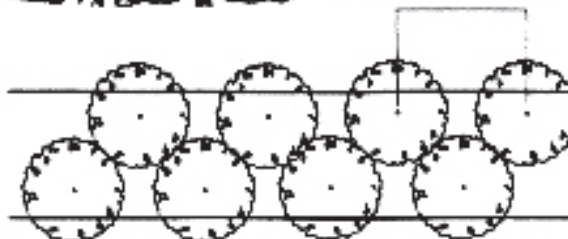
Maximum 4' Centers

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

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



Maximum 12' Centers



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.

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

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.

Public Notice and Community Engagement

Planning strives to provide community members with information about upcoming cases in a variety of ways. In addition to posting public notice signs, our agency encourages applicants to provide information and offer opportunities for dialogue related to their upcoming case(s). The contact information you provide in your application may be used for that purpose. We require applicants to acknowledge their role in this process.

Sign Posting and Removal

The Administrative Rules and Procedures of the Knoxville-Knox County Planning Commission require a sign to be posted on the property for each application subject to consideration by the Planning Commission.

Planning staff will post the required sign. If a replacement sign(s) is needed, the applicant is responsible for picking up the new sign(s) from Planning and will be charged \$10 for each replacement.

Location and Visibility

The sign must be posted on the nearest adjacent/frontage street and in a location clearly visible to vehicles traveling in either direction. If the property has more than one street frontage, the sign should be placed along the street that carries more traffic. Planning staff may recommend a preferred location for the sign to be posted at the time of application.

Timing

The sign(s) must be posted not less than 12 days prior to the scheduled Planning Commission public hearing and must remain in place until the day after the meeting. In the case of a postponement, the sign can either remain in place or be removed and reposted not less than 12 days prior to the next Planning Commission meeting. The applicant is responsible for removing the sign after the application has been acted upon by the Planning Commission.

Acknowledgement

By signing below, you acknowledge that public notice signs must be posted and visible on the property consistent with the guidelines above and between the dates listed below.

6/27/26

Date to be Posted

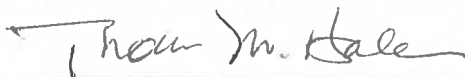
7/10/26

Date to be Removed

Have you engaged the surrounding property owners to discuss your request?

☐ Yes ☐ No

☒ No, but I plan to prior to the Planning Commission meeting



Applicant Signature

Thomas M. Hale

Applicant Name

July 26, 2026

Date