

**RESOLUTION NO. 2025-044  
VILLAGE OF CALEDONIA**

**A RESOLUTION APPROVING THE EXPLOSIVES AND BLASTING PERMIT RENEWAL  
FOR THE EXISTING QUARRY AT 1501 3 MILE ROAD**

The Village Board for the Village of Caledonia, Racine County, WI do resolve as follows:

**WHEREAS**, the Owner/Applicant, Payne & Dolan, Inc., has submitted the permit application (**Exhibit A**) for renewing the Explosives and Blasting Permit at 1301 3 Mile Road ("Property") per Title 7 Chapter 10 of the Village Code of Ordinances; and

**WHEREAS**, the Property has a Conditional Use Permit to operate and further develop the exiting limestone quarry including earthmoving, blasting, crushing, sorting and sizing, stockpiling, transportation and reclamation per Resolution No. 2024-065. This conditional use is renewed every 2 years in conjunction with the Blasting and Nonmetallic Mining Permit Renewal; and

**WHEREAS**, Village Staff have reviewed the application and supporting documentation and find it to be in line with the requirements of Title 7 Chapter 10 with the exception of multiple operators requiring their license to be updated during the permit period; and

**WHEREAS**, the Committee of the Whole recommended approval to the Village Board for the Permit Renewal at the May 13, 2025 meeting subject to the Village Engineer's Memo dated May 6, 2025 (**Exhibit B**); and

**NOW, THEREFORE, BE IT RESOLVED**, by the Village Board of the Village of Caledonia that the Explosives and Blasting Permit Renewal is hereby approved for the reasons and requirements set forth in **Exhibit A** and in compliance with all applicable Village Ordinances.

Adopted by the Village Board of the Village of Caledonia, Racine County, Wisconsin, this 27 day of May, 2025.

**VILLAGE OF CALEDONIA**

By: Thomas R Weatherston  
Thomas Weatherston  
Village President

Attest: Jennifer Bass  
Jennifer Bass  
Village Clerk

# MEMORANDUM

Date: May 6, 2025

To: Committee of the Whole  
Village Board

From: Ryan Schmidt, P.E.  
Village Engineer



Re: **Payne & Dolan – Racine Quarry – Explosives and Blasting Permit 2025**

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## BACKGROUND INFORMATION

The Village of Caledonia issues and annual Explosives and Blasting Permit for the Payne and Dolan Racine Quarry. The information and the required permit fees for the Permit was submitted by Payne & Dolan on April 14, 2025. The information for the permit was reviewed by the Engineering Department and appears to be in order. There is one expired license as of the application date and two that will expire during the permit period that will need to be updated at those times. An updated Blaster List is required to be submitted for the Village Board Meeting by May 27<sup>th</sup> to correct the current expired license of one individual and if any modifications are made during the permit period, a new list shall be provided.

This Explosive and Blasting Permit is valid from July 1, 2025, to June 30, 2026. This Explosive and Blasting Permit is hereby recommended for approval at the May 13<sup>th</sup> Committee of the Whole meeting and the May 27<sup>th</sup> Village Board Meeting.

## RECOMMENDATION

**Move to recommend approval to the Village Board the Explosive and Blasting Permit for Payne & Dolan, Inc. – Racine Quarry subject to the following:**

- 1. An updated Licensed Blaster List for the Racine Quarry is submitted to the Village as licenses are renewed or staff are added so a current list is on file at the Village Hall.**

April 14<sup>th</sup>, 2025

Mr. Ryan Schmidt  
Village of Caledonia  
5043 Chester Lane  
Caledonia, WI 53402

**RE: Explosives Use Permit – Racine Quarry**

Dear Mr. Schmidt:

In accordance with the Village of Caledonia's Code of Ordinances, Title 7, Chapter 10, Explosives and Blasting, Payne+Dolan respectfully submits this application for renewal of the explosive use permit for our Racine Quarry located at 1501 Three Mile Road in the Village of Caledonia.

Concurrent with this application, Payne+Dolan will notify in writing all village residents or owners located within the scaled distance area in order that they may request a pre-blast survey as allowed by the above ordinance.

The following documents are enclosed and submitted in support of our application:

1. Permit fee of \$500.00
2. Blasting procedures and types of explosive
3. Legal description of explosives use area
4. Scale distance calculations
5. Licensed blasters to be employed at the quarry
6. Explosives Use Permit Map
7. Copy of letter sent to residents or owners regarding the pre-blast survey
8. List of residents or owners notified
9. Copy of Performance Bond in the amount of \$50,000.00
10. Aerial photograph, scaling 1 inch = 200 feet with a 50' x 50' grid showing the permitted use area and the surrounding area within 500 feet

Thank you for your time and effort in this request. We appreciate the opportunity to work in your community. If you have any questions and/or need additional information, please do not hesitate to contact me at (262) 524-1258 or [cweninger@walbecgroup.com](mailto:cweninger@walbecgroup.com)

Sincerely,

**Payne+Dolan, Inc.**



Clint Weninger, P.G.  
Land Resources Manager

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## Explosives Use

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**Blasting Designs:** Generally, there are seven different blasting designs that could be used at the Payne & Dolan Racine Quarry. The specific blast design used varies with the blast location, rock formation and/or face height being blasted. All standard blast designs can be described as one of the seven following types:

- Type 1: Production shot, 3-1/2" hole, no deck
- Type 2: Production shot, 3-1/2" hole, single deck
- Type 3: Production shot, 4" hole, no deck
- Type 4: Production shot, 4" hole, single deck
- Type 4: Production shot, 3" hole, no deck
- Type 5: Production shot, 3" hole, single deck
- Type 6: Production shot, 3" hole, double deck

Variations on these methods are occasionally used when development is taking place.

**Explosives Supplier:** Different manufacturers according to cost, efficiency, and availability may supply explosives used in the quarry. The emulsion based blasting agent is supplied by Quick Supply, and is the current standard blasting agent supplier in use at the Racine Quarry. Payne & Dolan, in following normal operating procedures, does intend to seek improvements in blast performance by the introduction of new and/or different explosive products as available. No dynamite products are used at the Racine Quarry.

**Blasting Systems:** An electronic blasting system is the form of blasting technique in use:  
Quick Supply: The Electronic System used enables blasting control through its precision timing and flexibility. Delay periods can vary between 0-15,000 milliseconds, with a 1 millisecond increment according to the attached Standard Blast Designs. The electronic blasting system allows us to be safe, environmentally sound, and neighbor friendly.

**Note:** See "Standard Blast Designs" for additional details on the seven standard blast designs.

## Racine Quarry

Racine County

Depending upon distance, decks can be added or removed to reduce pounds/delay. All Main Charges are Emulsion. Timing between Holes & Rows are done electronically, measuring between 1 & 500 ms.

## Hole Diameter (inches)

Hole Depth (feet)

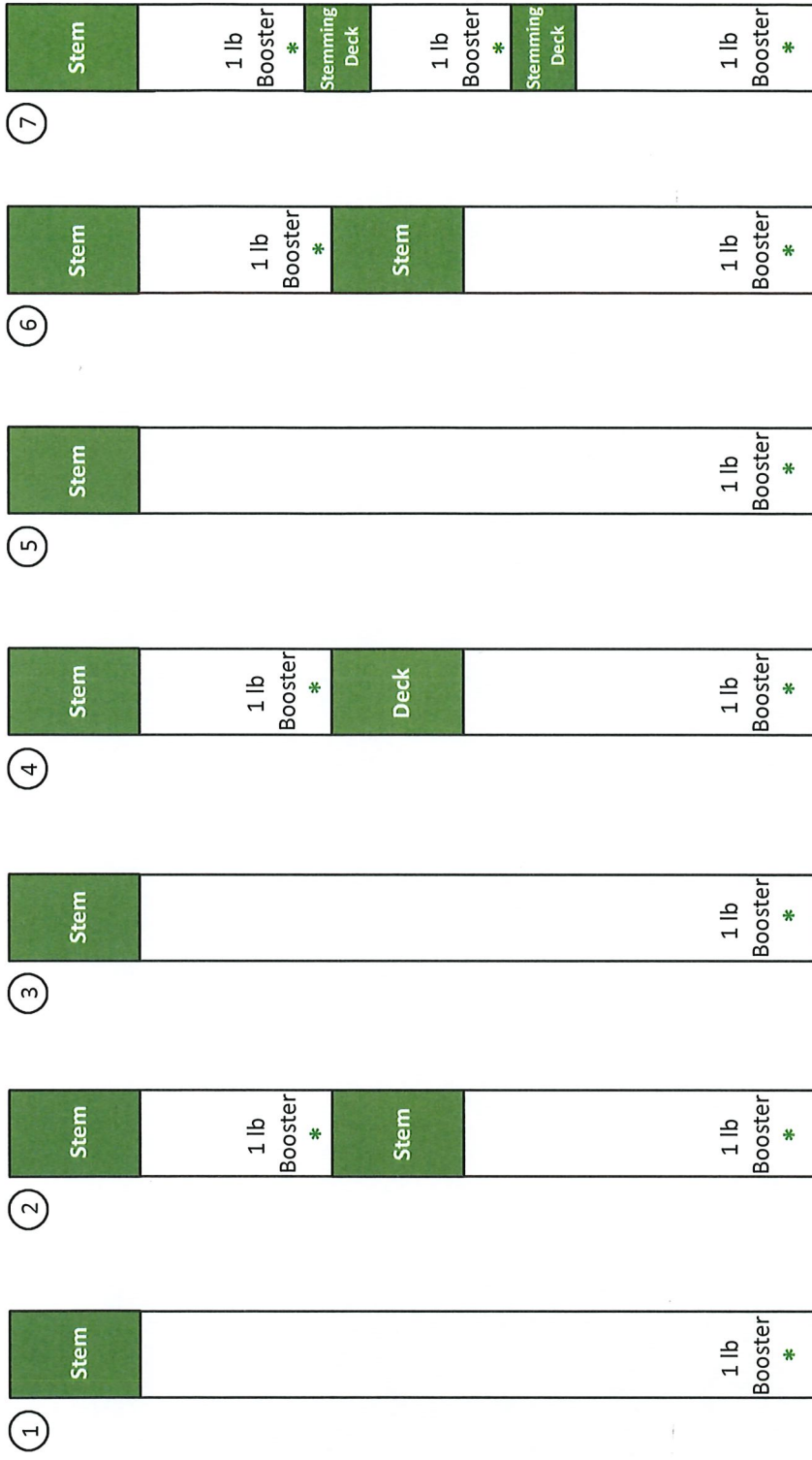
No. Decks

**Evolutive Type:**

### 1. Bottom Load Booster (lbs)

No. Holes

Max. LB/Delay:



3.5	25-40	4-6	0	1/2 Wet
3.5	20-60	4-6	1	1/2 Wet
4	20-60	4-6	0	1/2 Wet
4	20-60	4-6	1	1/2 Wet
3	25-40	4-6	0	1/2 Wet
3	20-60	4-6	1	1/2 Wet
3	25-85	4-6	2	1/2 Wet

1 or 3/4	1 or 3/4	1 or 3/4	1 or 3/4	1 or 3/4	1 or 3/4
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	70-100	1-7
	70-100	1-7
	70-100	1-7
	70-100	1-7
	70-100	1-7

180 @ 1000'	180 @ 1000'	180 @ 1000'	180 @ 1000'	180 @ 1000'
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## Explosives Use Area

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### Property Description – East Quarry

That portion of the SE ¼ of Section 29 and SW ¼ of Section 28, T4N-R23E, Village of Caledonia, Racine County, Wisconsin described as follows:

Commencing at the section corner common to Sections 29, 28, 32 and 33 of said T4N-R23E; thence N 39°43'33" W 42.92 feet to the intersection of the North right-of-way line of Three Mile Road and West right-of-way line of Vacated Charles Street, said intersection is the point of beginning of this description; thence, along said North right-of-way line, S 89°59'14" W 1096.15 feet; thence, continuing along said North right-of-way line, N 00°00'46" E 17.01 feet; thence, continuing along said North right-of-way line, N 89°59'18" W 394.00 feet to the easterly right-of-way line of Douglas Avenue; thence, along said easterly right-of-way line, N 44°25'45" W 113.67 feet; thence, continuing along said easterly right-of-way line, N 06°00'00" W 390.35 feet; thence, continuing along said easterly right-of-way line, on the arc of a 956.71 foot radius curve, concave to the southwest, the chord of which bears N 12°39'26" W 221.82 feet; thence, continuing along said easterly right-of-way line, N 19°30'13" W 313.94 feet; thence, continuing along said easterly right-of-way line, N 18°10'08" W 393.39 feet; thence N 40°23'05" E 162.93 feet; thence N 71°49'52" E 8.18 feet; thence N 18°10'08" W 221.10 feet; thence S 71°49'52" W 147.18 feet to said easterly right-of-way line of Douglas Avenue; thence, along said easterly right-of-way line, N 18°10'08" W 200.52 feet; thence S 89°45'06" E 1561.64 feet; thence N 01°17'40" E 462.90 feet; thence S 89°45'06" E 376.77 feet; thence on the arc of a 748.00 foot radius curve, concave to the northeast, the chord of which bears S 50°49'46" E 703.26 feet; thence on the arc of a 272.00 foot radius curve, concave to the southwest, the chord of which bears S 38°48'34" E 350.11 feet; thence S 01°15'02" W 1393.61 feet; thence N 89°50'28" W 634.97 feet to said West right-of-way line of Vacated Charles Street; thence, along said Vacated right-of-way line, S 01°00'35" W 200.09 feet to the point of beginning.

**Property Description – West Quarry**

That portion of the SW ¼ and the SE ¼ of Section 29, T4N-R23E, Village of Caledonia, Racine County, Wisconsin described as follows:

Commencing at the ¼ section corner common to Sections 29 and 32 of said T4N-R23E; thence, along the North-South ¼ line of said Section 29, N 01°04'36" E 33.01 feet to the North right-of-way line of Three Mile Road and the point of beginning of this description; thence, along said North right-of-way line, S 89°57'20" W 1545.62 feet; thence N 00°44'40" E 407.00 feet; thence S 89°57'20" W 205.06 feet; thence N 00°44'40" E 1002.47 feet; thence S 89°54'57" E 472.03 feet; thence N 00°44'40" E 553.04 feet; thence S 89°54'57" E 910.70 feet, to the westerly right-of-way line of the Union Pacific Railroad; thence, along said westerly right-of-way line, S 19°48'26" E 1655.87 feet; thence, continuing along said westerly right-of-way line, on the arc of a 5729.58 foot radius curve, concave to the southwest, the chord of which bears S 17°42'05" E 421.06 feet, to said North right-of-way line of Three Mile Road; thence, along said North right-of-way line, N 89°59'14" W 346.68 feet to the point of beginning.

## Scale Distance Calculation

In accordance with Regulation 3 (D) (2) (d) (v), a scale distance factor of 100 has been used to determine the area of pre-blast notification. There is no change to the maximum charge used at the explosives use boundary from previous renewals.

Larger charges may be used inside the explosives use boundary, however, the charge per delay and scale distance notification radius relationship will not exceed that of the max charge listed at the perimeter of each pit. For example, a charge of 125 lbs/delay could be used at 330 ft inside of the East Pit Explosives Use Boundary and be equivalent to the max of 62 lbs/delay at the explosives use boundary. (See Map 1)

The distances from the explosives use boundary for pre-blast notification were calculated as follows:

$$\text{Notification Radius (ft)} = \text{Scale Distance} \times \sqrt{\text{Max Charge at Perimeter} \left( \frac{\text{lbs}}{\text{delay}} \right)}$$

### East Quarry Blasting

Max Charge at Explosives Use Boundary = 62 lbs/delay

$$\text{Notification Radius (ft)} = 100 \times \sqrt{62 \frac{\text{lbs}}{\text{delay}}}$$

Notification Radius = 788 ft

### West Quarry Blasting

Max Charge at Explosives Use Boundary = 82 lbs/delay

$$\text{Notification Radius (ft)} = 100 \times \sqrt{82 \frac{\text{lbs}}{\text{delay}}}$$

Notification Radius = 906 ft



## Licensed Blasters

<b>Quick Supply Company</b>	<b>WI License #</b>	<b>Class</b>	<b>Expiration Date</b>
Thomas James Burke	1066454	5	4/3/2028
John Henry Sites	1056449	5	8/27/2027
Terry Gene Johnson	247772	7	2/22/2026
Gregorick Randall Johnson	1338104	5	1/26/2028
Robert McCollum	1522050	5	3/3/2029
Nicholas Rohloff	1286615	6	8/8/2026
Cory Fuss	844729	5	5/21/2025
Elias D Amundson-Minot	1543971	5	4/21/2026
Dustin Boerst	1043548	5&6	3/13/2027
<b>Payne &amp; Dolan</b>	<b>WI License #</b>	<b>Class</b>	<b>Expiration Date</b>
Quentin Maxwell	1243501	5	4/4/2029

**Note:** Additional Wisconsin licensed, minimum Class 5, blasters may be added or removed during the year.



*An Equal Opportunity Employer*

N3 W23650 Badinger Road | Waukesha, WI 53188  
262.524.1700 | [walbecgroup.com](http://walbecgroup.com)

April 14<sup>th</sup>, 2025

**RE: Pre-Blast Survey – Notification Letter**

Dear Neighbor:

To comply with the blasting ordinance set forth by the Village of Caledonia, Chapter 10, Section 7-10-5(c)(4)(c), Payne+Dolan, Inc. is offering you a preblast survey of your home upon request. This service is offered annually as part of our Blasting Permit renewal process, however, the ordinance does limit property owners to one preblast survey every six years unless the dwelling or structure has been substantially modified or improved.

If you have not had a preblast survey completed within the last six years and would wish to request one, please contact the Village Public Works Director or Bryanna Bucholtz with Payne+Dolan at [bbucholtz@walbecgroup.com](mailto:bbucholtz@walbecgroup.com) or:

Payne+Dolan, Inc.  
c/o Bryanna Bucholtz  
N3W23650 Badinger Road  
PO Box 781  
Waukesha, WI 53187-0781

Notices should be received by June 1<sup>st</sup>, 2025 to insure that all requested surveys can be completed in a timely manner.

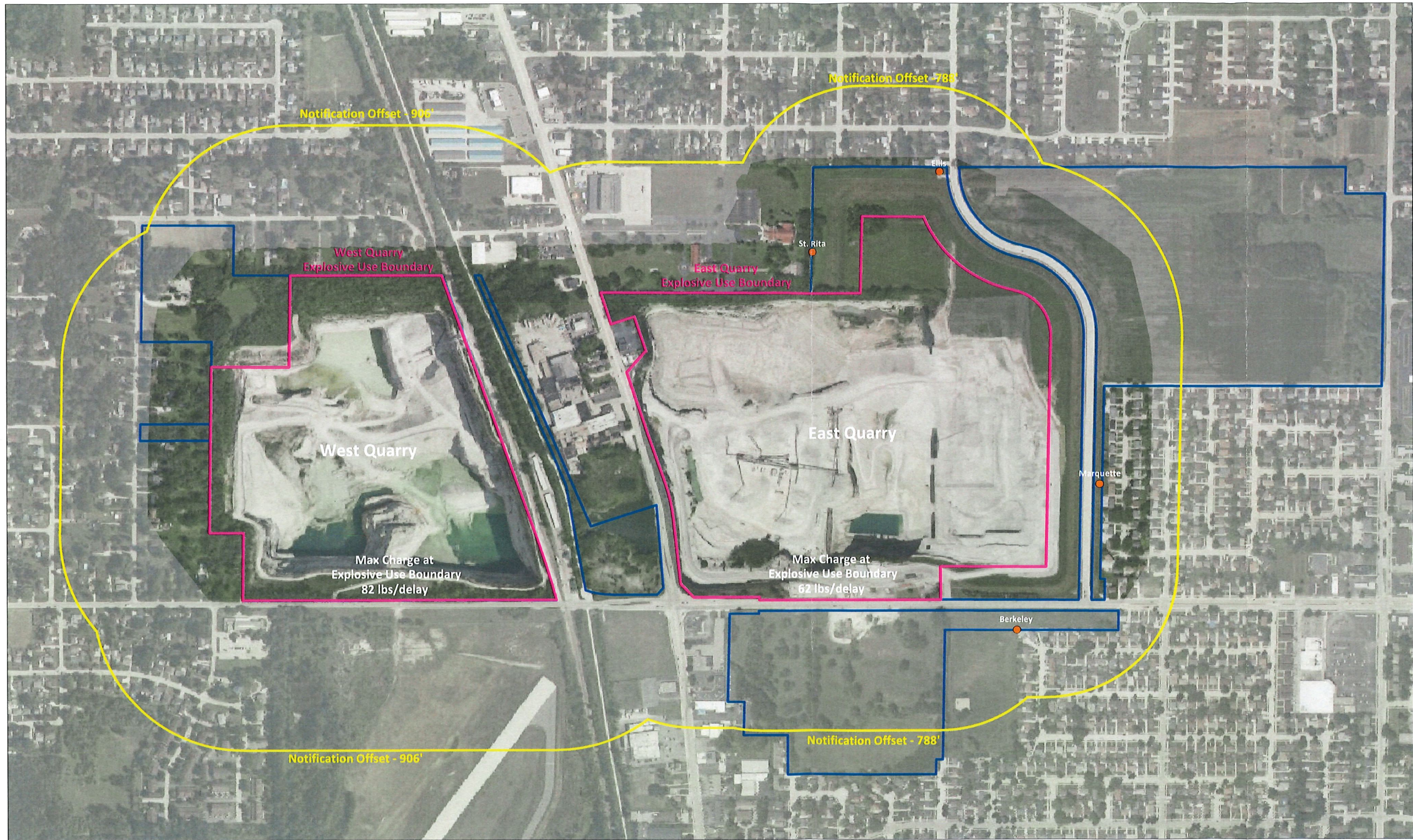
If you have any questions, please don't hesitate to contact me at (262) 524-1258 or [cweninger@walbecgroup.com](mailto:cweninger@walbecgroup.com).

Sincerely,

**Payne+Dolan, Inc.**

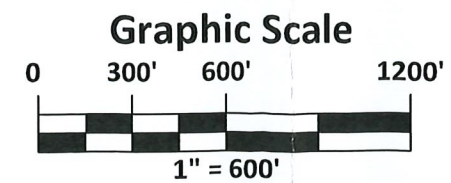
Clint Weninger, P.G.  
Land Resources Manager





#### LEGEND

- Property Boundary
- Explosives Use Boundary
- Notification Radius
- Production Blasting Boundary
- Current Permanent Seismograph Location



## Explosives Use - Notification Radius

Aerial Imagery Obtained from Racine County GIS  
Aerial Date - Summer 2024

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**Payne+Dolan**  
A WALBEC COMPANY

# 1

SHEET 1 OF 1

Drawn By: BLB

Site #: 80360

Date: 4/1/2025