

CITY OF FRANKLIN  
QUARRY MONITORING COMMITTEE\*  
MEETING AGENDA

Franklin City Hall, Council Chambers  
9229 West Loomis Road, Franklin, Wisconsin 53132  
Tuesday, October 29, 2024, 6:00 p.m.

- I. Call to Order, Roll Call and Pledge of Allegiance
- II. Approval of Minutes
  - a. Regular meeting of August 13, 2024.
- III. Citizen Comment Period  
PLEASE NOTE: Each speaker may need to be limited to three minutes, allowing everyone who wishes the opportunity to speak
- IV. Business (Action may be taken on any item)
  - a. Quarterly presentation by Stantec Consulting Services, Inc., 3rd quarter of calendar year 2024 (July-September).
  - b. Quarry monitoring scope of services for calendar year 2025.
- V. Meeting scheduling discussion
- VI. Adjournment

*\* Notice is given that a majority of the Common Council may attend this meeting to gather information about an agenda item over which the Common Council has decision-making responsibility. This may constitute a meeting of the Common Council per State ex rel. Badke v. Greendale Village Board, even though the Common Council will not take formal action at this meeting.*

*Notice is further given that upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information, please contact the Franklin City Clerk's office at (414) 425-7500.*

**City of Franklin**  
**Quarry Monitoring Committee Meeting**  
**Inspection Conference Room, Franklin City Hall**  
**6:00 PM**  
**August 13, 2024**  
**Minutes**

**I. CALL TO ORDER**

The August 13, 2024, Quarry Monitoring Committee meeting was called to order by Alderman Mike Barber at 6:00 p.m. in the Inspection Conference Room at City Hall.

Chair Alderman Mike Barber and members Edward Pings and Jon TenHaken were present. Excused was Alderman Yousef Hasan and Vice-Chair Dina Swanson. Also present were Principal Planner Régulo Martínez-Montilva, Kristen Gunderson-Inden of Stantec Consulting Services, and Kyle Bosch as well as Wes Hineline of Payne & Dolan.

**II. APPROVAL OF MINUTES**

- a. Regular meeting of May 14, 2024.

Member TenHaken moved and Member Pings seconded to approve the minutes as presented. On voice vote, all present voted 'aye'; motion carried (3-0-2).

**III. CITIZEN COMMENT PERIOD**

Citizen comment period opened at 6:02 p.m. and closed at 6:02 p.m. No comments.

**IV. BUSINESS**

- a. Quarterly presentation by Stantec Consulting Services, Inc., 2nd quarter of calendar year 2024 (April-June).

Kristen Gunderson presented.

Member Pings moved and Member TenHaken seconded a motion to accept and place on file. On voice vote, all voted 'aye'; motion carried (3-0-2).

- b. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).

Member TenHaken moved and Member Pings seconded a motion to accept and place on file. On voice vote, all voted 'aye'; motion carried (3-0-2).

V. **SCHEDULE NEXT MEETING**

Next meeting is scheduled for October 29, 2024.

VI **ADJOURNMENT**

Member Pings moved and Member TenHaken seconded to adjourn the August 13, 2024 Quarry Monitoring Committee meeting at 6:27 p.m. All present voted 'aye'; motion carried (3-0-2).

DRAFT



**Stantec Consulting Services Inc.**  
12080 North Corporate Parkway, Suite 200  
Mequon WI 53092-2661

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October 10, 2024

Project/File: 193710393

**Regulo Martinez-Montilva**

Planning Manager - Department of City Development  
City of Franklin  
9229 West Loomis Road  
Franklin, Wisconsin 53132  
RMartinez-Montilva@franklinwi.gov

Dear Regulo Martinez-Montilva,

**Reference: City of Franklin, WI - Franklin Aggregates Quarry Monitoring Summary, Period: 3rd Quarter 2024**

The enclosed information summarizes monitoring activities completed during the third quarter of 2024 by Stantec Consulting Services Inc. (Stantec) pertaining to the Franklin Aggregates, Inc. quarry (owned by Payne & Dolan, Inc.) located at 6211 W. Rawson Avenue, Franklin, Wisconsin (the Quarry). Stantec was retained by the City of Franklin to conduct a combination of direct observation (visual) monitoring, seismic monitoring of the quarry operations, and evaluation of citizen complaints. Separate descriptions of services and project background are provided in **Attachments A and B**, respectively. This letter summarizes the results.

**Direct Observation (Visual) Monitoring**

Copies of completed observation forms are prepared and posted to the project Teams site for review by City representatives. Copies of individual reports are not provided with this summary report.

Six observations events were completed during the monitoring period. Unannounced inspections were completed on July 8, July 17, August 22, and September 5, 2024; and announced inspections were performed on August 5 and September 19, 2024. The street sweeper was observed in use on Rawson Avenue during five of the six site visits. Typically, minor dust was observed from trucks exiting to the east on Rawson Avenue during the visits. No other issues were observed.

**Seismic Monitoring**

As contracted by the City, Stantec provided remote vibration monitoring using two seismographs co-located with two existing Payne & Dolan (Vibra-Tech) monitors at 7301 S. 51st Street (VT1 and S1) and 5800 W. Allwood Drive (VT4 and S2). The monitoring provides continuous (24/7) remote monitoring. Payne & Dolan also has monitors at 7526 S. 51st Street (VT2) and southeast of the quarry (VT3). Summaries of blasting data, comparing the Payne & Dolan unit recordings to the Stantec (Sauls Seismic) unit recordings, were prepared for the quarter, and are presented in **Attachment C. Figure 1** illustrates the locations of the blasts in the quarter.

Reference: City of Franklin, WI - Franklin Aggregates Quarry Monitoring Summary, Period: 3rd Quarter 2024

Highlights of the seismic data include the following:

- Between July 1 and September 30, 2024, a total of 26 blasting events occurred. 13 of 26 (50%) of these blasts were confirmed by the Stantec monitors.
- Per the Planned Development District agreements (PDD), 85% of the quarry's blasts within any calendar year must be below the maximum permissible vibration (of 0.30 inches per second (in/sec)), measured at the closest residence or inhabited structure not owned or controlled by the quarry. This is more stringent than State of Wisconsin regulations which require quarry operators to report any ground vibration levels to the Wisconsin Department of Natural Resources (WDNR) that are above 0.75 in/sec.
  - None of the blasting events measured by Payne & Dolan or Stantec had a vibration greater than 0.30 in/sec this quarter. 96% of the quarry's blasts year to date were below this level. This is in conformance with the PDD.
- Per the PDD, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year, measured at the residence or inhabited structure closest to the site of the blast which is not owned or controlled by the Operator. Notwithstanding any other provision in this subsection, the Operator shall not exceed the airblast limitation imposed by Wis. Adm. Code, SPS Ch. 307.
  - None of the blasting events measured by Payne & Dolan or Stantec had an air overpressure (AO) greater than 123dB this quarter. 99% of the quarry's blasts this quarter and year to date were below this level. This is in conformance with the PDD.
- The corresponding blast data measured by Stantec with the Sauls Seismic monitors generally aligned with the readings at each Payne & Dolan sponsored Vibra-Tech monitor. There were some larger differences in the AO and frequency readings. It should be noted that in addition to the fact the monitors are produced by different manufacturers, there are a variety of variables that can influence actual readings. The Sauls Seismic monitors were swapped out and recalibrated in July 2024 and are due for calibration in April 2025 by the equipment vendor; calibration is typically completed annually.
- In general, the largest blast readings at each monitor appear to correlate with the proximity of the nearest adjacent blast location.

### **Blast Complaint Evaluation**

A compilation of all blast events and complaints received by Stantec for the period July 1 through September 30, 2024, is provided as **Attachment C**. Note that Attachment C does not provide the actual complainant details (name, address, and phone number) if known; it was decided to have this information remain confidential in this report. However, complainant identity may be released upon public records request to the City of Franklin. The locations of all blasts and complaints are shown on **Figure 1**. The following highlights the results of the complaint evaluation:

#### **Complaints - General**

- 14 complaints (formally submitted)
- 0 complaints (informally submitted – phone call only)
- 1 complaints – regarding material in the road

Reference: City of Franklin, WI - Franklin Aggregates Quarry Monitoring Summary, Period: 3rd Quarter 2024

- 13 complaints – regarding vibration/noise

Complaints – Blast Related

- 13 complaints – corresponding to actual blast events
- 0 complaints – not corresponding to specific blast events
- 11 complaints – complainant requested location not be identified
  - 5 identified with general location of Marquette Avenue area
  - 1 identified with general location of Root River Hights
- 2 complaints – complainant location identified

Complaints (non-anonymous or general location given; confirmed blast related) - Locations

- 5 complaints – east of 51<sup>st</sup> Street
- 3 complaints – south of Drexel Avenue
- 0 complaints – west of Root River

Summary of Complaint Comments – Blast Related

- July 9, 2024 (highest readings at the 7526 S 51<sup>st</sup> St monitor – 0.228 in/sec PPV, 7301 S. 51<sup>st</sup> St monitor - 111 dB AO) – one confidential complaint – blast in central pit.
  - *“We heard a blast and the house shook and the windows and glass rattled.”*
- July 23, 2024 (highest readings at the 7526 S 51<sup>st</sup> St monitor – 0.070 in/sec PPV and 106 dB AO) – one confidential complaint – blast in southern pit.
  - *“Long blast that lasted multiple seconds. Shook entire couch and living room walls.”*
- July 25, 2024 (highest readings at the SE of Quarry monitor – 0.143 in/sec PPV and 109 dB AO) – one complaint to the south, one confidential complaint – blast in central pit.
  - *“The blast shook and rattled the entire house, windows, and floor.”*
  - *“Blasting.”*
- July 30, 2024 – 9:10AM (highest readings at the SE of Quarry monitor – 0.068 in/sec PPV and 7526 S. 51<sup>st</sup> St - 110 dB AO) – one confidential complaint – blast in southern pit.
  - *“Blast shook entire house and rattled windows.”*
- July 30, 2024 – 12:44PM (highest readings at the SE of Quarry monitor – 0.133 in/sec PPV and 119 dB AO) – one confidential complaint – blast in southern pit.
  - *“A quarry blast shook entire house for several seconds. The windows rattled and my glassware rattled.”*
  - *“This blast lasted a long time and shook walls and tables.”*
- August 5, 2024 (highest readings at the highest readings at the 7526 S 51<sup>st</sup> St monitor – 0.108 in/sec PPV and 5800 Allwood -- 114 dB AO) – one confidential complaint identified as a home in Root River Heights – blast in southern pit.

Reference: City of Franklin, WI - Franklin Aggregates Quarry Monitoring Summary, Period: 3rd Quarter 2024

- *“Rumbling and entire house and cabinets shook strongly.”*
- August 8, 2024 (highest readings at the highest readings at the SE of Quarry monitor – 0.048 in/sec PPV and 5800 Allwood -- 121 dB AO) – one confidential complaint identified as a home in the Marquette Avenue area – blast in southern pit.
  - *“A blast shook our house and I tripped while walking due to the floor shaking.”*
- August 14, 2024 (highest readings at the highest readings at the SE of Quarry monitor – 0.063 in/sec PPV and 7526 S 51<sup>st</sup> St monitor - 117 dB AO) – one confidential complaint identified as a home in the Marquette Avenue area – blast in central pit.
  - *“A quarry blast rattled all of our windows and shook the house.”*
- August 16, 2024 (highest readings at the highest readings at the 7301 S 51<sup>st</sup> St monitor – 0.093 in/sec PPV, 122 dB AO) – one confidential complaint identified as a home in the Marquette Avenue area – blast in northern pit.
  - *“We heard a very loud and audible blast with our windows open that rattled the house and shook the tables”*
- August 29, 2024 (highest readings at the highest readings SE of Quarry monitor – 0.110 in/sec PPV and the 5800 Allwood monitor – 113 dB AO) – one confidential complaint identified as a home in the Marquette Avenue area and one other complaint to the south – blast in southern pit.
  - *“Excessive explosion sound and house vibration.”*
  - *“A blast from the quarry shook the entire house and rattled the floors and windows.”*
- September 9, 2024 – 9:01AM (highest readings at the 7526 S. 51<sup>st</sup> St monitor – 0.233 in/sec PPV and 116 dB AO) – one confidential complaint identified as a home in the Marquette Avenue area – blast in central pit.
  - *“A blast from the quarry violently shook the house. I was walking down the hallway and tripped due to how large the blast was. The house physically shook and disturbed my house. Loudest and hardest blast we have felt.”*

#### Summary of Complaint Comments – Non-Blast Related

- The City of Franklin received an online complaint form on September 20, 2024, regarding asphalt pieces near the intersection of Rawson Avenue and South 31<sup>th</sup> Street.
  - *“If the quarry sells recycled asphalt and it is trucked by dump trucks, one of them dumped and spread (of) asphalt pieces in the east bound traffic lanes at the intersection above. I thought by now this issue would have been addresses as now it is bonded to the concrete and needs to be scraped off.”*

#### Blast Events

- 26 blast events - during monitoring period 3Q2024 (shot numbers 30 through 55)
- 11 blast events - corresponding to complaints
  - 1 weather: rain or light rain
  - 8 weather: haze, partly to mostly cloudy, or cloudy

Reference: City of Franklin, WI - Franklin Aggregates Quarry Monitoring Summary, Period: 3rd Quarter 2024

- 2 weather: clear, fair, or scattered clouds
- 9 time: prior to 12:00 pm (noon)
- 2 time: after 12:00 pm
- 9 blast events with one complaint
- 2 blast event with two complaints

Quarry Blast Locations Producing Complaints

- 6 southern area of quarry
- 4 central area of quarry
- 1 northern area of quarry

Upon review of these results outlined above, on Figure 1, and in Attachment C, the following observations are made:

- There was one quarry operational complaint made regarding asphalt pieces from trucks in the intersection of 31<sup>st</sup> and Rawson in September. Most complaints focus on quarry blasting and resulting ground vibrations.
- Two blasts this quarter had more than one complaint.
- One address this quarter has complained more than once so far year to date (one address - once in the first quarter and three times in the second quarter and once this quarter); one other address had two informal complaints in the first quarter.
- All but two complaints this quarter requested confidentiality; six confidential complaints did list general locations. It is not known if any of these complaints were from the same addresses.
- Five complaints were identified as in the Marquette Avenue area to the east of South 51st Street.
- No non-confidential complaints came from west of the Root River.



Reference: City of Franklin, WI - Franklin Aggregates Quarry Monitoring Summary, Period: 3rd Quarter 2024

Please feel free to contact Mike Roznowski or Kristen Gunderson-Inden if you have any questions.

Sincerely,

**STANTEC CONSULTING SERVICES INC.**



**Kristen Gunderson-Inden**  
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**Mike Roznowski, CHMM**  
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Attachments: A - Franklin Quarry Seismic Monitoring Description of Services  
B - Franklin Quarry Seismic Monitoring Project Background  
C - Summary of Seismic Data – 3<sup>rd</sup> Quarter 2024  
Figure 1 - Seismic Monitoring, Blasting, and Complaint Locations, 3<sup>rd</sup> Quarter 2024

**Attachment A** Franklin Quarry Seismic Monitoring  
Description of Services

## **DESCRIPTION OF SERVICES**

### **Direct Observation (Visual) Monitoring**

During 2024, Stantec will conduct a total of sixteen (16) qualitative site visits at the quarry to observe and document whether the site was compliant with operational parameters defined in the existing Planned Development District (PDD) agreements, and to evaluate whether the quarry's general operations are consistent with best management practices employed by other similar quarries. Site visits are a combination of announced and unannounced, but all are conducted during normal business hours. The days of the week and times of the day for the visits vary. The observations are planned to be completed between April and October, when quarry operations are occurring, and airborne dust is more likely. Qualitative data to be collected includes the following:

- Visual observation of all aspects of the mining operation, including but not limited to:
  - Trucking operations, in particular pertaining to dust issues along Rawson Avenue
  - Operational issues that may affect local citizens in some form of adverse off-site impact
- Direct air quality observations, including:
  - General site and surrounding visual air quality, including opacity, in particular along Rawson Avenue
  - Dust control measures and issues on-site that may affect off-site receptors
  - Dust control issues directly adjacent off-site
  - Any other dust issues that may affect local citizens
- Quarry operations review (for announced visits), including:
  - Review of quarry records pertaining to dust control measures and recordkeeping, ensuring that the operator is following standard protocol to minimize off-site impacts, and evaluating how well and how quickly they respond to potential of actual off-site impact situations
  - Comparison of records to stated performance objectives and respective PDD compliance, only as they pertain to dust in general, and along Rawson Avenue in particular

The findings of each visit will be documented on a standard form previously approved by the City. The form will be filled out by hand during each site visit, and then scanned/posted to a project SharePoint site for review by City representatives. Stantec also will obtain photos to document site or directly adjacent off-site conditions, and short-duration video clips (e.g., showing dust impacts). These photos and videos are also uploaded to the project SharePoint site.

In addition to the observations and record review, Stantec also will obtain and document on the inspection forms local meteorological conditions that were relevant to the observations (e.g., temperature, wind speed, wind direction, humidity, and precipitation).

Stantec also will notify the City Planning Manager of any condition (pertaining to air or dust monitoring, or other PDD condition) that we become aware of that exceeds the allowances outlined in the PDD. This communication will be completed prior to noon the business day following the day we become aware of any such event.

### **Seismic Monitoring**

Stantec provides remote vibration monitoring by using Nomis Seismographs. Sauls Seismic is subcontracted to operate two separate seismographs, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51st Street, and 5800 W. Allwood Drive. Each monitor was pole-mounted and provided with a weatherproof enclosure. Power is provided via an internal battery and an external battery connected to a solar panel. This type of configuration provides continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet.

Stantec also will notify the City Planning Manager of any condition (pertaining to blasting, noise or other PDD condition) that we become aware of that exceeded the allowances outlined in the PDD. This communication will be completed prior to noon the business day following the day we become aware of any such event.

### **Blast Complaint Evaluation**

Periodically the City forwards to Stantec specific information pertaining to quarry complaints received. Stantec evaluates each one on a quarterly basis to determine the following corresponding collaborative conditions:

- Off-site dust complaints: weather conditions (wind direction and speed) the day of the complaint
- Off-site seismic complaints: seismic data from both Stantec (if monitoring at the time) and Payne & Dolan placed monitors
- On occasion, the City may request an exceptional blast complaint evaluation if a blast event receives an unusually high number of complaints. A letter report will be issued by Stantec within approximately one week of the request that describes:
  - seismic data from both Stantec and Payne & Dolan placed monitors
  - weather conditions (wind direction and speed) the day of the complaint
  - a figure showing location of blast and complaints

**Attachment B** Franklin Quarry Seismic Monitoring Project  
Background

## **Background Summary**

Seismic monitoring was completed to document whether the site was compliant with operational parameters defined in the existing Planned Development District (PDD) agreements. Prior to 2018, Stantec completed a variety of 2, 4, and 8-week seismic monitoring periods. During 2018, Stantec completed one 4-week period and one 16-week period of monitoring. Monitoring consisted of placing a city owned and maintained Instantel MiniMate Plus fixed seismograph equipped with an external geophone at one of two city-established blast monitoring sites or vaults for each period. Seismic data was downloaded once every two weeks. Due to equipment limitations the data could not be downloaded remotely as it occurs (i.e., real time).

In 2019, Stantec provided remote vibration monitoring by using Nomis Seismographs. Sauls Seismic was subcontracted to install two separate seismographs, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51st Street, and 5800 W. Allwood Drive. Each monitor was pole-mounted and provided with a weatherproof enclosure. Power was provided via an internal battery and an external battery connected to a solar panel. This type of configuration provided continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet.

As contracted by the City for 2024, Stantec is providing remote vibration monitoring using two seismographs co-located with two existing Payne & Dolan (Vibra-Tech) monitors at 7301 S. 51st Street and 5800 W. Allwood Drive. The monitors provided continuous (24/7) remote monitoring. Quarterly summaries of blasting data, comparing the Payne & Dolan (Vibra-Tech) unit recordings, to the Stantec (Sauls Seismic) unit recordings, will be prepared for the calendar year.

Per the PDD #23 and #24 Ordinances, 85% of the quarry's blasts within any calendar year must be below the maximum permissible vibration (also referred to as particle or ground velocity) of 0.30 inches per second (in/sec), measured at the closest residence or inhabited structure not owned or controlled by the quarry. This is more stringent than State of Wisconsin regulations (Wisconsin Department of Industry, Labor and Human Relations in ch.ILHR 7, Wis. Adm. Code on any blast [new reference now Wis. Adm. Code, Safety and Professional Services (SPS) Chapter 307]) which require quarry operators to report any ground vibration levels to the Wisconsin Department of Natural Resources that are above 0.75 in/sec.

Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year, measured at the residence or inhabited structure closest to the site of the blast which is not owned or controlled by the Operator. Notwithstanding any other provision in this subsection, the Operator shall not exceed the airblast limitation imposed by Wis. Adm. Code, SPS Ch. 307.

In addition to obtaining and reviewing the blast data from the city-owned, fixed seismograph, Stantec also received data from Payne & Dolan's Vibra-Tech meters, which provided independently monitored Franklin Aggregate blasting data for the entire calendar year. Four monitors are used by Vibra-Tech, three along South 51<sup>st</sup> Street, and one just south of West Drexel Avenue. This independently monitored data was compared to the Stantec-obtained data.

**Attachment C** Summary of Seismic Data – 3<sup>rd</sup> Quarter 2024

Payne & Dolan Blast Monitoring Data									Stantec Blast Monitoring Data			Comparison of P&D and Stantec Monitoring Data			Complaint Information			Weather (for complaints only)							
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	Freq (Hz)	AO (dB)	PPV (in/sec)	Freq (Hz)	AO (dB)	Difference in PPV Values	Difference in Freq Values	Difference in AO Values	Complaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)
7/2/2024	10:33 AM	30	north	5800 ALLWOOD	3,830	0.025	11.9	105.0	N/D	N/D	N/D	--	--	--	no										
7/2/2024	10:33 AM	30	north	7301 S 51st Street	1,479	0.138	35.7	122.0	0.110	13.4	122.5	0.028	22.30	-0.50											
7/2/2024	10:33 AM	30	north	7526 S. 51st Street	1,999	0.085	29.4	117.0																	
7/2/2024	10:33 AM	30	north	SE of Quarry	2,743	0.033	17.9	111.0																	
7/8/2024	10:21 AM	31	central	5800 ALLWOOD	2,239	0.028	22.7	106.0	N/D	N/D	N/D	--	--	--	no										
7/8/2024	10:21 AM	31	central	7301 S 51st Street	2,262	0.023	29.4	112.0	N/D	N/D	N/D	--	--	--											
7/8/2024	10:21 AM	31	central	7526 S. 51st Street	1,263	0.205	27.8	113.0																	
7/8/2024	10:21 AM	31	central	SE of Quarry	946	0.115	26.3	110.0																	
7/9/2024	12:48 PM	32	central	5800 ALLWOOD	2,403	0.023	33.3	105.0	N/D	N/D	N/D	--	--	--	yes	1	unknown (confidential)	E	9	none	29.18	69	cloudy	none	77
7/9/2024	12:48 PM	32	central	7301 S 51st Street	2,115	0.030	55.6	111.0	N/D	N/D	N/D	--	--	--											
7/9/2024	12:48 PM	32	central	7526 S. 51st Street	1,083	0.228	29.4	111.0																	
7/9/2024	12:48 PM	32	central	SE of Quarry	882	0.110	31.3	111.0																	
7/19/2024	10:23 AM	33	south	5800 ALLWOOD	1,711	0.058	11.6	110.0	0.055	12.4	104.2	0.003	-0.80	5.80	no										
7/19/2024	10:23 AM	33	south	7301 S 51st Street	2,887	0.025	33.3	106.0	N/D	N/D	N/D	--	--	--											
7/19/2024	10:23 AM	33	south	7526 S. 51st Street	2,116	0.080	15.2	107.0																	
7/19/2024	10:23 AM	33	south	SE of Quarry	1,693	0.093	16.1	114.0																	
7/23/2024	10:49 AM	34	south	5800 ALLWOOD	1,527	0.063	29.4	104.0	0.065	17.6	97.5	-0.003	11.80	6.50	yes	1	unknown (confidential)	SW	7	none	29.24	73	light rain	0	71
7/23/2024	10:49 AM	34	south	7301 S 51st Street	3,016	0.030	9.6	104.0	N/D	N/D	N/D	--	--	--											
7/23/2024	10:49 AM	34	south	7526 S. 51st Street	2,159	0.070	15.2	106.0																	
7/23/2024	10:49 AM	34	south	SE of Quarry	1,610	0.063	13.2	104.0																	
7/25/2024	10:49 AM	35	central	5800 ALLWOOD	2,278	0.025	20	106.0	N/D	N/D	N/D	--	--	--	yes	2	1 south 1 unknown (confidential)	NW	9	none	29.51	64	mostly cloudy	none	72
7/25/2024	10:49 AM	35	central	7301 S 51st Street	2,235	0.023	17.9	106.0	N/D	N/D	N/D	--	--	--											
7/25/2024	10:49 AM	35	central	7526 S. 51st Street	1,203	0.105	25	109.0																	
7/25/2024	10:49 AM	35	central	SE of Quarry	882	0.143	23.8	109.0																	
7/26/2024	10:14 AM	36	south	5800 ALLWOOD	1,665	0.058	29.4	110.0	N/D	N/D	N/D	--	--	--	no										
7/26/2024	10:14 AM	36	south	7301 S 51st Street	2,881	0.023	10.6	103.0	N/D	N/D	N/D	--	--	--											
7/26/2024	10:14 AM	36	south	7526 S. 51st Street	2,052	0.080	13.5	110.0																	
7/26/2024	10:14 AM	36	south	SE of Quarry	1,574	0.083	15.2	110.0																	
7/30/2024	9:10 AM	37	south	5800 ALLWOOD	1,441	0.060	31.3	106.0	0.058	12.4	98.8	0.003	18.90	7.20	yes	1	unknown (confidential)	WNW	6	none	29.09	74	mostly cloudy	none	77
7/30/2024	9:10 AM	37	south	7301 S 51st Street	3,111	0.025	7.4	106.0	N/D	N/D	N/D	--	--	--											
7/30/2024	9:10 AM	37	south	7526 S. 51st Street	2,250	0.055	15.6	110.0																	
7/30/2024	9:10 AM	37	south	SE of Quarry	1,671	0.068	17.2	108.0																	
7/30/2024	12:44 PM	38	south	5800 ALLWOOD	1,717	0.033	29.4	111.0	0.038	25.6	102.8	-0.005	3.80	8.20	yes	1	unknown (confidential)	ESE	5	none	29.10	61	partly cloudy	none	85
7/30/2024	12:44 PM	38	south	7301 S 51st Street	2,798	0.023	18.5	113.0	N/D	N/D	N/D	--	--	--											
7/30/2024	12:44 PM	38	south	7526 S. 51st Street	1,729	0.070	11.6	118.0																	
7/30/2024	12:44 PM	38	south	SE of Quarry	1,002	0.133	26.3	119.0																	
8/1/2024	10:02 AM	39	south	5800 ALLWOOD	1,422	0.045	20	106.0	0.060	23.2	100	-0.015	-3.20	6.00	no										
8/1/2024	10:02 AM	39	south	7301 S 51st Street	3,077	0.020	11.4	104.0	N/D	N/D	N/D	--	--	--											
8/1/2024	10:02 AM	39	south	7526 S. 51st Street	2,138	0.065	13.2	107.0																	
8/1/2024	10:02 AM	39	south	SE of Quarry	1,481	0.065	14.7	108.0																	
8/5/2024	10:50 AM	40	north	5800 ALLWOOD	3,783	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--	no										
8/5/2024	10:48 AM	40	north	7301 S 51st Street	1,530	0.085	35.7	118.0	0.105	36.5	108.8	-0.020	-0.80	9.20											
8/5/2024	10:48 AM	40	north	7526 S. 51st Street	2,014	0.068	38.5	119.0																	
8/5/2024	10:48 AM	40	north	SE of Quarry	2,732	0.035	19.2	111.0																	
8/5/2024	11:31 AM	41	south	5800 ALLWOOD	1,424	0.085	29.4	114.0	0.083	26.9	104.9	0.003	2.50	9.10	yes	1	south	N	15	none	29.27	76	cloudy	none	78
8/5/2024	11:31 AM	41	south	7301 S 51st Street	3,091	0.033	6.5	103.0	N/D	N/D	N/D	--	--	--											
8/5/2024	11:31 AM	41	south	7526 S. 51st Street	2,185	0.108	13.2	105.0																	
8/5/2024	11:31 AM	41	south	SE of Quarry	1,561	0.080	19.2	105.0																	
8/8/2024	10:01 AM	42	south	5800 ALLWOOD	1,724	0.028	20.8	121.0	N/D	N/D	N/D	--	--	--	yes	1	east	W	6	none	29.18	64	mostly	none	73



Payne & Dolan Blast Monitoring Data									Stantec Blast Monitoring Data			Comparison of P&D and Stantec Monitoring Data			Complaint Information			Weather (for complaints only)								
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	Freq (Hz)	AO (dB)	PPV (in/sec)	Freq (Hz)	AO (dB)	Difference in PPV Values	Difference in Freq Values	Difference in AO Values	Complaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)	
8/8/2024	10:01 AM	42	south	7301 S 51st Street	2,818	0.025	8.6	107.0	N/D	N/D	N/D	--	--	--												cloudy
8/8/2024	10:01 AM	42	south	7526 S. 51st Street	1,995	0.045	18.5	107.0																		
8/8/2024	10:01 AM	42	south	SE of Quarry	1,543	0.048	38.5	112.0																		
8/12/2024	11:45 AM	43	north	5800 ALLWOOD	3,983	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--	no											
8/12/2024	11:45 AM	43	north	7301 S 51st Street	1442	0.020	35.7	103.0	N/D	N/D	N/D	--	--	--												
8/12/2024	11:45 AM	43	north	7526 S. 51st Street	2,073	N/D	N/D	N/D																		
8/12/2024	11:45 AM	43	north	SE of Quarry	2,863	N/D	N/D	N/D																		
8/14/2024	10:21 AM	44	central	5800 ALLWOOD	2,006	0.035	21.7	108.0	N/D	N/D	N/D	--	--	--	yes	1	east	SE	5	none	29.42	56	mostly cloudy	none	77	
8/14/2024	10:25 AM	44	central	7301 S 51st Street	2488	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--												
8/14/2024	10:21 AM	44	central	7526 S. 51st Street	1,614	0.048	15.2	117.0																		
8/14/2024	10:21 AM	44	central	SE of Quarry	1,258	0.063	17.2	111.0																		
8/16/2024	11:47 AM	45	north	5800 ALLWOOD	3,662	0.033	23.8	109.0	N/D	N/D	N/D	--	--	--	yes	1	east	SW	13	none	29.03	79	mostly cloudy	none	78	
8/16/2024	11:47 AM	45	north	7301 S 51st Street	1,639	0.093	12.8	122.0	0.090	39.3	112.8	0.003	-26.50	9.20												
8/16/2024	11:47 AM	45	north	7526 S. 51st Street	2,032	0.083	25	121.0																		
8/16/2024	11:47 AM	45	north	SE of Quarry	2,690	0.030	23.8	114.0																		
8/21/2024	12:02 PM	46	south	5800 ALLWOOD	1,255	0.088	25	108.0	0.088	21.3	100	0.000	3.70	8.00	no											
8/21/2024	12:01 PM	46	south	7301 S 51st Street	3,264	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--												
8/21/2024	12:02 PM	46	south	7526 S. 51st Street	2,341	0.063	17.9	110.0																		
8/21/2024	12:02 PM	46	south	SE of Quarry	1,658	0.085	26.3	108.0																		
8/29/2024	10:56 AM	47	south	5800 ALLWOOD	1,685	0.078	23.8	113.0	0.085	30.1	105.5	-0.008	-6.30	7.50	yes	2	1 south 1 east	ESE	6	none	29.43	81	cloudy	none	72	
8/29/2024	10:56 AM	47	south	7301 S 51st Street	2,841	0.028	8.3	105.0	N/D	N/D	N/D	--	--	--												
8/29/2024	10:56 AM	47	south	7526 S. 51st Street	1,988	0.090	12.8	110.0																		
8/29/2024	10:56 AM	47	south	SE of Quarry	1,500	0.110	16.1	109.0																		
8/30/2024	10:48 AM	48	central	5800 ALLWOOD	2,169	0.040	26.3	107.0	0.043	34.1	98.8	-0.003	-7.80	8.20	no											
8/30/2024	10:48 AM	48	central	7301 S 51st Street	2,327	0.030	41.7	111.0	N/D	N/D	N/D	--	--	--												
8/30/2024	10:48 AM	48	central	7526 S. 51st Street	1,491	0.095	21.7	109.0																		
8/30/2024	10:48 AM	48	central	SE of Quarry	1,260	0.108	23.8	110.0																		
8/30/2024	1:31 PM	49	central	5800 ALLWOOD	2,311	0.025	31.3	105.0	N/D	N/D	N/D	--	--	--	no											
8/30/2024	1:31 PM	49	central	7301 S 51st Street	2187	0.020	13.5	107.0	N/D	N/D	N/D	--	--	--												
8/30/2024	1:31 PM	49	central	7526 S. 51st Street	1,390	0.073	20.8	108.0																		
8/30/2024	1:31 PM	49	central	SE of Quarry	1,278	0.075	38.5	109.0																		
9/4/2024	10:52 AM	50	south	5800 ALLWOOD	1,613	0.033	27.8	112.0	N/D	N/D	N/D	--	--	--	no											
9/4/2024	10:52 AM	50	south	7301 S 51st Street	2,889	0.028	33.3	108.0	N/D	N/D	N/D	--	--	--												
9/4/2024	10:52 AM	50	south	7526 S. 51st Street	1,982	0.058	11.9	112.0																		
9/4/2024	10:52 AM	50	south	SE of Quarry	1,418	0.080	23.8	111.0																		
9/9/2024	9:07 AM	51	central	5800 ALLWOOD	2,827	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--	yes	1	east	W	14	24	29.33	57	fair	none	67	
9/9/2024	9:01 AM	51	central	7301 S 51st Street	1,672	0.043	41.7	114.0	N/D	N/D	N/D	--	--	--												
9/9/2024	9:01 AM	51	central	7526 S. 51st Street	807	0.233	35.7	116.0																		
9/9/2024	9:01 AM	51	central	SE of Quarry	1,157	0.068	27.8	112.0																		
9/9/2024	12:00 PM	52	central	5800 ALLWOOD	2,575	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--	no											
9/9/2024	11:59 AM	52	central	7301 S 51st Street	1,929	0.028	38.5	108.0	N/D	N/D	N/D	--	--	--												
9/9/2024	11:59 AM	52	central	7526 S. 51st Street	971	0.150	35.7	114.0																		
9/9/2024	11:59 AM	52	central	SE of Quarry	1,007	0.085	38.5	112.0																		
9/11/2024	11:45 AM	53	central	5800 ALLWOOD	2,542	0.023	45.5	108.0	N/D	N/D	N/D	--	--	--	no											
9/11/2024	11:45 AM	53	central	7301 S 51st Street	1,978	0.035	41.7	113.0	N/D	N/D	N/D	--	--	--												
9/11/2024	11:45 AM	53	central	7526 S. 51st Street	960	0.185	33.3	114.0																		
9/11/2024	11:45 AM	53	central	SE of Quarry	919	0.120	29.4	112.0																		
9/12/2024	10:58 AM	54	central	5800 ALLWOOD	2,394	0.020	62.5	107.0	N/D	N/D	N/D	--	--	--	no											
9/12/2024	10:58 AM	54	central	7301 S 51st Street	2,110	0.040	38.5	109.0	N/D	N/D	N/D	--	--	--												

Payne & Dolan Blast Monitoring Data									Stantec Blast Monitoring Data			Comparison of P&D and Stantec Monitoring Data			Complaint Information			Weather (for complaints only)							
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	Freq (Hz)	AO (dB)	PPV (in/sec)	Freq (Hz)	AO (dB)	Difference in PPV Values	Difference in Freq Values	Difference in AO Values	Complaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)
9/12/2024	10:58 AM	54	central	7526 S. 51st Street	1,122	0.173	33.3	110.0																	
9/12/2024	10:58 AM	54	central	SE of Quarry	953	0.103	38.5	110.0																	
9/20/2024	12:09 PM	55	south	5800 ALLWOOD	1,333	0.088	35.7	105.0	0.075	26.9	98.8	0.013	8.80	6.20	no										
9/20/2024	12:09 PM	55	south	7301 S 51st Street	3,157	N/D	N/D	N/D	N/D	N/D	N/D	--	--	--											
9/20/2024	12:09 PM	55	south	7526 S. 51st Street	2,180	0.045	10.9	107.0																	
9/20/2024	12:09 PM	55	south	SE of Quarry	1,458	0.070	25	107.0																	

**Totals**                      **26**      **blast events**

11      13      **events with complaints / total complaints**

**Notes:**      Shaded cells do not have a meter in that location  
 N/D = not detected, meter did not detect blast

**Figure 1** Seismic Monitoring, Blasting, and Complain  
Locations, 3<sup>rd</sup> Quarter 2024

V:\1937\Active\19370943303\_data\gis\_cad\gis\mxd\2024\_3rd\_Quarter\_Report\fig1\_Seismic\_Complaints\_19370487.mxd Revised: 2024-10-08 By: aswam

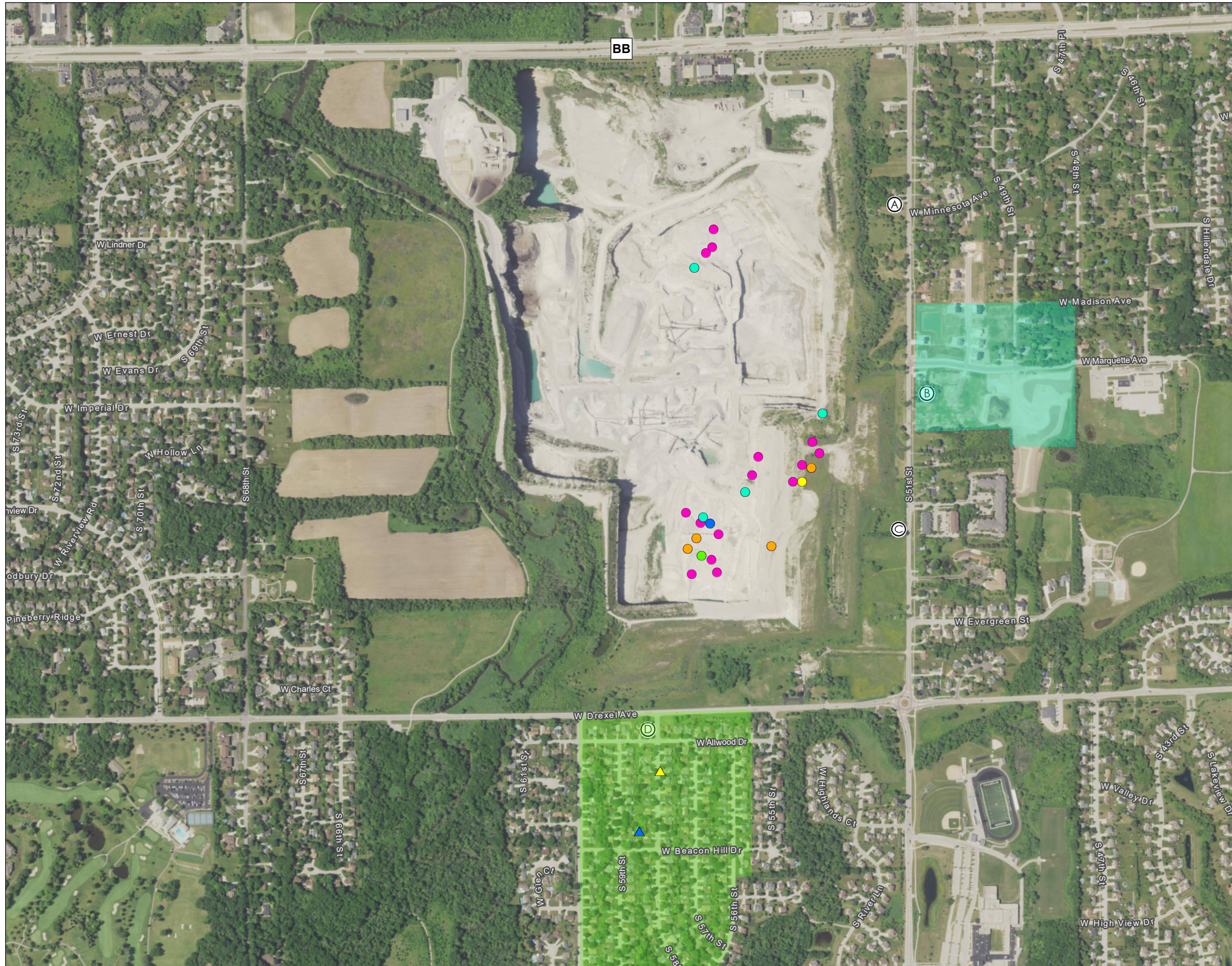


Figure No. **1**

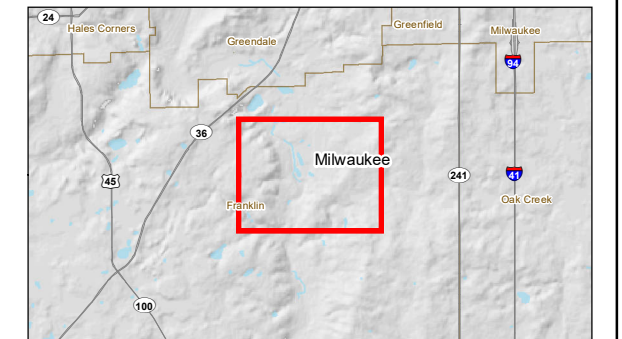
Title **Seismic Monitoring, Blasting, and Complaint Locations - 2nd Quarter 2024**

Client/Project **City of Franklin** 193710393  
Vicinity of Payne and Dolan Quarry

Project Location **C. of Franklin, Milwaukee Co., WI** Prepared by AJS on 2024-10-08  
TR by DG on 2024-10-08  
IR by KGI on 2024-10-08



- Legend
- Seismic Monitoring Location
- (A) Vibra-Tech(VT1) and Stantec(S1)
  - (B) Vibra-Tech(VT2)
  - (C) Vibra-Tech(VT3)
  - (D) Vibra-Tech(VT4) and Stantec(S2)
  - Non-complaint Blast Location
- Complaint Blast Location
- Confidential (#32, #34, #37, #38)
  - Confidential and 7984 S 58th St (#35)
  - Root River Heights (#41)
  - Marquette Ave Area (#42, #44, #45, #51)
  - Marquette Ave Area and 8072 S 59th St (#47)
- Address Specific Blast Complaint
- ▲ Blast #35
  - ▲ Blast #47
- Complaint Area
- Marquette Ave Area
  - Root River Heights



Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, SCO, WDNR, WisDOT
3. Orthophotography: 2022 NAIP



## ATTACHMENT A - QUARRY MONITORING SERVICES

### SCOPE OF WORK AND ASSOCIATED COST

The following scope of work items, each with their own associated professional fee, is offered to the City by Stantec for calendar year 2025.

DESCRIPTION	EVENT PERIOD	COST PER EVENT	# OF EVENTS	SUBTOTAL	NOTES REGARDING SCOPE OF SERVICES
<b>Operations Monitoring</b>	daily	\$900	15	\$13,500	Visual assessments around quarry perimeter, concentrating on Rawson Avenue adjacent to the quarry entrances. Will include weather data as part of observation summary, along with photos and short duration videos during periods of high winds. A percentage of the visits will also include on-site observations and records review.
<b>Blast Monitoring</b>	monthly	\$2,130	12	\$25,560	Stantec will provide remote vibration monitoring by using Nomis Seismographs. We plan to subcontract Sauls Seismic to assist with this scope of work. Two separate seismographs will be installed, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51 <sup>st</sup> Street and 5800 W. Allwood Drive. Each monitor will be provided with an enclosure and will either be pole mounted or located in a short-stack weatherproof enclosure. Power will be provided via an internal battery and an external battery connected to a solar panel. All maintenance/repair and annual calibration of seismographs are included. This type of configuration will provide continuous (24/7) remote monitoring (except during calibrations & maintenance actions), allowing Stantec to have access to data anytime via the Internet. No written reports or summaries will be provided monthly.
<b>Exceptional Blast Complaint Evaluation</b>	Per City request	\$900	0	\$0	For unusual blast events (e.g., resulting in multiple complaints), at the City's request, Stantec will prepare a brief summary report describing: seismic data from both Stantec/Payne & Dolan placed monitors; wind direction and speed the day of the complaint, a figure showing blast and complaint locations. (Note: For each exceptional blast complaint evaluation completed, Stantec will reduce one single Operational Monitoring event [which is same fee])
<b>Quarterly Reports and Presentation</b>	Quarterly (May, August, November 2024, and February 2025)	\$3,985	4	\$15,940	<p>Stantec will prepare a quarterly report (to be distributed/presented as part of the regularly scheduled Quarry Monitoring Committee meetings) describing:</p> <ul style="list-style-type: none"> <li>• Operations monitoring completed in prior quarter</li> <li>• Blast monitoring completed in prior quarter (summary of blasting data, comparing the Payne &amp; Dolan unit recordings, to the Stantec unit recordings)</li> <li>• Citizen complaints received by the City of Franklin in prior quarter <ul style="list-style-type: none"> <li>○ For off-site dust complaints <ul style="list-style-type: none"> <li>▪ weather conditions (wind direction and speed) the day of the complaint</li> </ul> </li> <li>○ For off-site seismic complaints <ul style="list-style-type: none"> <li>▪ seismic data from both Stantec and Payne &amp; Dolan placed monitors</li> <li>▪ weather conditions (wind direction and speed; temp.; humidity; precipitation) the day of the complaint</li> <li>▪ a figure showing locations of blasts along with location of complaints</li> <li>▪ a short summary of the nature of any complaints</li> </ul> </li> </ul> </li> </ul> <p>The quarterly report and presentation in February 2026 will also present highlights of the operations, blast monitoring, and complaint evaluations, completed during calendar year 2025. This annual report is not meant to repeat what has already been provided in the prior quarterly reports; rather, it is intended to be a brief summary.</p>

**\$55,000 TOTAL (compared to budget: \$55,000)**

**Note:** Stantec has completed no Exceptional Blast Complaint Evaluations in several years. In addition, based on prior years Stantec is estimating approximately 25 different blasts will result in complaints needing to be evaluated as part of the quarterly reports and presentations. Stantec agrees to be flexible with the City regarding this scope of work as the year progresses as the actual number of events are determined, and agrees not to exceed the approved budget without prior approval.