## CITY OF FRANKLIN QUARRY MONITORING COMMITTEE\* MEETING AGENDA

## Franklin City Hall, **Council Chambers** 9229 West Loomis Road, Franklin, Wisconsin 53132 Tuesday, May 24, 2022, <u>6:00 p.m.</u>

- I. Call to Order, Roll Call and Pledge of Allegiance
- II. Approval of Minutes
  - a. Regular meeting of March 29, 2022.
- 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. Hearings
- V. Business (Action may be taken on any item)
  - a. Welcome new members Bryan Maersch and Edward Pings.
  - b. Quarterly presentation by Stantec Consulting Services, Inc., 1st quarter of calendar year 2022 (January, February and March).
  - c. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).
  - d. Selection of Chair and Vice-Chair.
- VI. Meeting scheduling discussion

#### VII. 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 Hearing Room, Franklin City Hall 6:00 PM March 29, 2022 Minutes

## I. CALL TO ORDER

The March 29, 2022, Quarry Monitoring Committee meeting was called to order by Alderwoman Kristen Wilhelm at 6:00 p.m. in the Hearing Room at City Hall.

Alderwoman Kristen Wilhelm, Alderman Mike Barber, member Jon TenHaken and non-voting member Dina Swanson were present. Member Fred Knueppel was absent. Also present were Principal Planner Régulo Martínez-Montilva and Clint Wenninger of Payne & Dolan.

## II. APPROVAL OF THE MINUTES

a. Regular meeting of January 25, 2022.

Alderman Barber moved and member TenHaken seconded to approve the minutes as presented. On voice vote, all present voted 'aye'; the vote was 3-0-1, motion carried.

## III. CITIZEN COMMENT PERIOD

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

## IV. HEARINGS

a. None.

## V. BUSINESS

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

Principal Planner Martínez-Montilva stated that no complaints have been received this year so far.

b. Status update on monitor relocation.

Principal Planner Régulo Martínez-Montilva commented that staff sent a letter to the property owner in January, no response has been received as of today.

c. 2021 Annual Reclamation Report.

Principal Planner Régulo Martínez-Montilva commented that staff sent the 2021 Annual Reclamation Report to the DNR (Department of Natural Resources). No changes to the reclaimed acreage with respect to the previous year.

## VI. SCHEDULE NEXT MEETING

Next meeting scheduled for May 24, 2022, based on quorum.

## VII. ADJOURNMENT

Member TenHaken moved and member Barber seconded to adjourn the March 29, 2022, Quarry Monitoring Committee meeting at 6:08 p.m. All present voted 'aye'; motion carried.



**Stantec Consulting Services Inc.** 1165 Scheuring Road De Pere, Wisconsin 54115 Tel: (920) 592-8400 Fax: (920) 592-8444

April 20, 2022

Heath Eddy Planner - Department of City Development City of Franklin 9229 W. Loomis Road Franklin, Wisconsin 53132 <u>HEddy@franklinwi.gov</u>

#### Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 1<sup>st</sup> Quarter 2022 Stantec Project: 193707487

Dear Mr. Eddy:

The enclosed information summarizes monitoring activities completed during the first quarter of 2022 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 description 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 FTP site for review by City representatives. Copies of individual reports are not provided with this summary report.

No direct observation events were completed during the monitoring period; observation events will resume in April 2022.

#### 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.

Highlights of the seismic data include the following:

- Between January 1 and March 31, 2022, a total of 21 blasting events occurred. 18 of 21 (86%) 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 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; thus 100% of the quarry's blasts were below this level. This is in conformance with the PDD.



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- 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.
  - One of the blasting events measured by Payne & Dolan or Stantec had an air overpressure (AO) greater than 123dB (126dB for the 3/17/22 [Activity Number 18] reading obtained from the monitor at 7526 South 51st Street). Stantec does not have a monitor at this location thus we could not verify this elevated AO from our readings. This is the first reading of 2022 with an AO over 123dB. There have been 21 blasts through the first quarter. Thus, 95% of the quarry's blasts have been below the PDD AO level through March 31, which is in conformance with the PDD. There were no complaints for the blast. In 2021, 2 of the 80 blasts for calendar year had an AO over 123dB (97.5% of blasts below the PDD AO level). Both of those blasts had the elevated AO readings at the same monitor and no complaints were received.
- The corresponding blast data measured by Stantec with the Sauls Seismic monitors generally aligned with the readings at each Payne & Dolan sponsored Vibra-Tech monitors. There were some larger differences in the AO 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 PPV readings. The Sauls Seismic monitors were recalibrated on October 21, 2021; 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 January 1 through March 31, 2022, is provided as Attachment C. Although not applicable for this quarter, 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. The locations of all blasts and complaints are shown on Figure 1. The following highlights the results of the complaint evaluation:

#### Complaints - General

- 0 complaints (formally submitted) total
- 0 complaints (informally submitted, e.g., phone call)
- 0 complaint regarding noise
- 0 complaint regarding dust
- 0 complaints miscellaneous
- 0 complaints regarding vibration

#### Complaints - Blast Related

- 0 complaints corresponding to actual blast events
- 0 complaints not corresponding to actual blast events
- 0 complaints complainant location identified
  - 0 households that complained once each
  - 0 household that complained two times
  - o 0 complaints no name and address provided (requested confidentiality)

) Stantec

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#### Complaints (non-anonymous; confirmed blast related) - Locations

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

#### Blast Events

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- 21 blast events during monitoring period 1Q2022 (shot numbers 0 through 21)
  - 0 blast events corresponding to complaints
    - o 0 weather: rain
    - o 0 weather: haze, partly to mostly cloudy, or cloudy
    - o 0 weather: clear, fair, or scattered clouds
    - 0 time: prior to 12:00 pm (noon)
    - o 0 time: after 12:00 pm
- 0 blast events with one complaint
- 0 blast events with two complaints
- 0 blast event with three complaints

## Quarry Blast Locations Producing Complaints

- 0 southern area of quarry
- 0 northern area of quarry

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

- No complaints were received in this quarter.
- All blasting locations were in the northern portion of the quarry during this quarter; no blasts occurred in the southern portion of the quarry. Complaints tend to come from blasts in the southern portion of the quarry.



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Please feel free to contact Mike Roznowski at 920-278-3200 or <u>mike.roznowski@stantec.com</u>; or Kristen Gunderson-Inden at 262-665-3447 or <u>kristen.gunderson-inden@stantec.com</u> if you have any questions.

# Respectfully, **STANTEC CONSULTING SERVICES INC.**

Kristen Gunderson-Inden Senior Environmental Scientist

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Michael B. Roznowski, CHMM Senior Principal

- Attachments
- A Franklin Quarry Seismic Monitoring Description of Services
  - B Franklin Quarry Seismic Monitoring Project Background
    - C Summary of Seismic Data 1st Quarter 2022
    - Figure 1 Seismic Monitoring, Blasting, and Complaint Locations, 1st Quarter 2022



# ATTACHMENT A

FRANKLIN QUARRY SEISMIC MONITORING DESCRIPTION OF SERVICES



#### **DESCRIPTION OF SERVICES**

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

During 2022, Stantec will conduct a total of nine (9) 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 will 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
  - o 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 file transfer protocol (FTP) 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 FTP 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:
  - o seismic data from both Stantec and Payne & Dolan placed monitors
  - $\circ$  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 2022, 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. There is a chance one of these monitors may be moved to an alternate location during 2022. The monitor 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 calendar year 2022.

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 -4th QUARTER 2021

Payne & Dolan Blast Monitoring Data							Stantec Monitorin		Comparison Stantec Moni		Com	nplaint	Information		Weather (for complaints only)							
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	AO (dB)	PPV (in/sec)	AO (dB)	Difference in PPV Values	Difference in AO dB Values	Com- plaints?	, #	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipi- tation	Temp. (°F)
1/6/2022	44567.52083	1	north	5800 ALLWOOD	3,709	N/D	N/D	N/D	N/D			No								•		_
1/6/2022	44567.51944	1	north north	7301 S 51st Street 7526 S. 51st Street	1,038 1,426	0.183	113 119	0.188	107	-0.005	6											
1/6/2022	44567.51944	1	north	SE of Quarry	2,281	0.03	118															
1/13/2022	44574.44444 44574.44306	2	north north	5800 ALLWOOD 7301 S 51st Street	3,755 888	N/D 0.178	N/D 108	N/D 0.205	N/D 107			No										
1/13/2022	44574.44306	2	north	7526 S. 51st Street	1,286	0.103	112	0.200	107	01027	-											
1/13/2022	44574.44306 44582.48333	2	north north	SE of Quarry 5800 ALLWOOD	2,207 3,736	0.03 N/D	107 N/D	N/D	N/D			No										
1/21/2022	44582.48333	3	north	7301 S 51st Street	1,032	0.148	112	0.168	106	-0.020	6	NO										
1/21/2022	44582.48333 44582.48333	3	north	7526 S. 51st Street	1,451	0.063	115 109															
1/21/2022 2/2/2022	44582.48333	4	north north	SE of Quarry 5800 ALLWOOD	2,312 3,774	0.033 N/D	109 N/D	N/D	N/D			No										
2/2/2022	44594.49375	4	north	7301 S 51st Street	877	0.1	106	0.103	103	-0.002	3											
2/2/2022	44594.49375	4	north north	7526 S. 51st Street SE of Quarry	1,300 2,226	0.07	109 108															
2/4/2022	44596.44097	5	north	5800 ALLWOOD	4,021	N/D	N/D	N/D	N/D			No										
2/4/2022	44596.43958 44596.43958	5	north north	7301 S 51st Street 7526 S. 51st Street	1389 2,052	0.113	106 111	0.090	105	0.023	1											
2/4/2022	44596.44097	5	north	SE of Quarry	2,864	N/D	N/D															
2/8/2022	44600.45486	6 6	north	5800 ALLWOOD 7301 S 51st Street	3,763	N/D 0.183	N/D 111	N/D	N/D 108		3	No										
2/8/2022 2/8/2022	44600.45417 44600.45417	6	north north	7301 S 51st Street 7526 S. 51st Street	1,026 1,477	0.183	111 116	0.165	108	0.018	5											
2/8/2022	44600.45417	6	north	SE of Quarry	2,342	0.03	112	/F				L										
2/10/2022	44602.47222 44602.47431	7	north north	5800 ALLWOOD 7301 S 51st Street	3,774 898	N/D 0.115	N/D 107	N/D 0.115	N/D 104	0.000	3	No										
2/10/2022	44602.47431	7	north	7526 S. 51st Street	1,329	0.05	111															
2/10/2022 2/14/2022	44602.47431 44606.47708	7	north north	SE of Quarry 5800 ALLWOOD	2,246 3,943	0.043 N/D	109 N/D	N/D	N/D			No										
2/14/2022	44606.47708	8	north	7301 S 51st Street	1321	0.095	109	0.093	104	0.003	5	NO										
2/14/2022	44606.47708 44606.47708	8	north north	7526 S. 51st Street SE of Quarry	1,937 2,749	0.04 N/D	110 N/D															
2/14/2022	44608.47708	9	north	5800 ALLWOOD	3,778	0.023	110	N/D	N/D			No										
2/18/2022	44610.44097	9 9	north	7301 S 51st Street	1,032	0.123	116	0.145	109	-0.022	7											
2/18/2022	44610.44097 44610.44097	9	north north	7526 S. 51st Street SE of Quarry	1,501 2,367	0.068	117 113															
2/21/2022	44613.45833	10	north	5800 ALLWOOD	3,959	N/D	N/D	N/D	N/D			No										
2/21/2022	44613.45347 44613.45347	10 10	north north	7301 S 51st Street 7526 S. 51st Street	1290 1,920	0.093	106 110	0.088	101	0.006	5											
2/21/2022	44613.45347	10	north	SE of Quarry	2,744	0.02	106															
2/28/2022 2/28/2022	44620.44444	11 11	north north	5800 ALLWOOD 7301 S 51st Street	3,783 1305	N/D N/D	N/D N/D	N/D N/D	N/D N/D			No										
2/28/2022	44620.44861	11	north	7526 S. 51st Street	1,795	0.023	110	NyD	NyD													
2/28/2022 3/1/2022		11 12	north north	SE of Quarry 5800 ALLWOOD	2,576 4,398	N/D N/D	N/D N/D	N/D	N/D			No										
3/1/2022	44621.44732	12	north	7301 S 51st Street	1160	0.055	116	0.073	111	-0.018	5	NO										
3/1/2022	44621.44792 44621.44792	12 12	north	7526 S. 51st Street	2,108	N/D	N/D N/D															
3/3/2022	44621.44792	12	north north	SE of Quarry 5800 ALLWOOD	3,057 3,854	N/D N/D	N/D	N/D	N/D			No										
3/3/2022		13	north	7301 S 51st Street	1,284	0.035	110	N/D	N/D													
3/3/2022 3/3/2022	44623.44861 44623.44792	13 13	north north	7526 S. 51st Street SE of Quarry	1,832 2,635	0.025 N/D	118 N/D															
3/4/2022	44624.46875	14	north	5800 ALLWOOD	3,999	N/D	N/D	N/D	N/D			No										
3/4/2022 3/4/2022		14 14	north north	7301 S 51st Street 7526 S. 51st Street	1055 1,739	0.065	108 114	0.065	104	0.000	5											
3/4/2022	44624.46875	14	north	SE of Quarry	2,635	N/D	N/D															
3/8/2022 3/8/2022	44628.51389 44628.51042	15 15	north north	5800 ALLWOOD 7301 S 51st Street	3,978 807	N/D 0.11	N/D 111	N/D 0.103	N/D 110	0.008	2	No										
3/8/2022 3/8/2022		15	north	7526 S. 51st Street	1,479	0.11	111 110	0.105	110	0.008												
3/8/2022	44628.51389	15	north	SE of Quarry	2,445	N/D	N/D	N/D	N/D			NI -										
3/10/2022 3/10/2022		16 16	north north	5800 ALLWOOD 7301 S 51st Street	3,979 1,289	N/D 0.085	N/D 106	N/D 0.078	N/D 100	0.008	6	No										
3/10/2022	44630.47778	16	north	7526 S. 51st Street	1,934	0.05	112															
3/10/2022 3/14/2022		16 17	north north	SE of Quarry 5800 ALLWOOD	2,762 4,044	N/D N/D	N/D N/D	N/D	N/D			No										
3/14/2022	44634.48819	17	north	7301 S 51st Street	1256	0.098	109	0.090	107	0.008	2											
3/14/2022	44634.48819 44634.48958	17 17	north north	7526 S. 51st Street SE of Quarry	1,952 2,803	0.035 N/D	110 N/D															
3/17/2022	44637.42708	18	north	5800 ALLWOOD	3,946	N/D	N/D	N/D	N/D			No										
3/17/2022		18 18	north	7301 S 51st Street	1,256	0.058	121	0.065	118	-0.007	3											
3/17/2022 3/17/2022		18	north north	7526 S. 51st Street SE of Quarry	1,879 2,709	0.04 N/D	126 N/D															
3/22/2022	44642.43056	19	north	5800 ALLWOOD	3,825	N/D	N/D	N/D	N/D			No										
3/22/2022		19 19	north north	7301 S 51st Street 7526 S. 51st Street	1331 1,855	0.058	119 112	0.058	116	0.001	3											
3/22/2022	44642.43681	19	north	SE of Quarry	2,638	0.023	104															
3/25/2022		20 20	north	5800 ALLWOOD 7301 S 51st Street	3,675 1375	N/D	N/D	N/D	N/D			No										
3/25/2022 3/25/2022		20	north north	7526 S. 51st Street	1375	N/D 0.035	N/D 114	N/D	N/D													
3/25/2022	44645.50139	20	north	SE of Quarry	2,510	N/D	N/D	/F				L										
3/29/2022 3/29/2022		21 21	north north	5800 ALLWOOD 7301 S 51st Street	3,669 912	N/D 0.188	N/D 106	N/D 0.235	N/D 102		4	No										
3/29/2022	44649.53403	21	north	7526 S. 51st Street	1,172	0.18	110															
3/29/2022 Totals	44649.53403	21 21	north blast events	SE of Quarry	2,085	0.07	96					0	0									

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

Stantec Document Classification: Stantec Internal



# FIGURE 1

SEISMIC MONITORING, BLASTING, AND COMPLAINT LOCATIONS, 4th QUARTER 2021

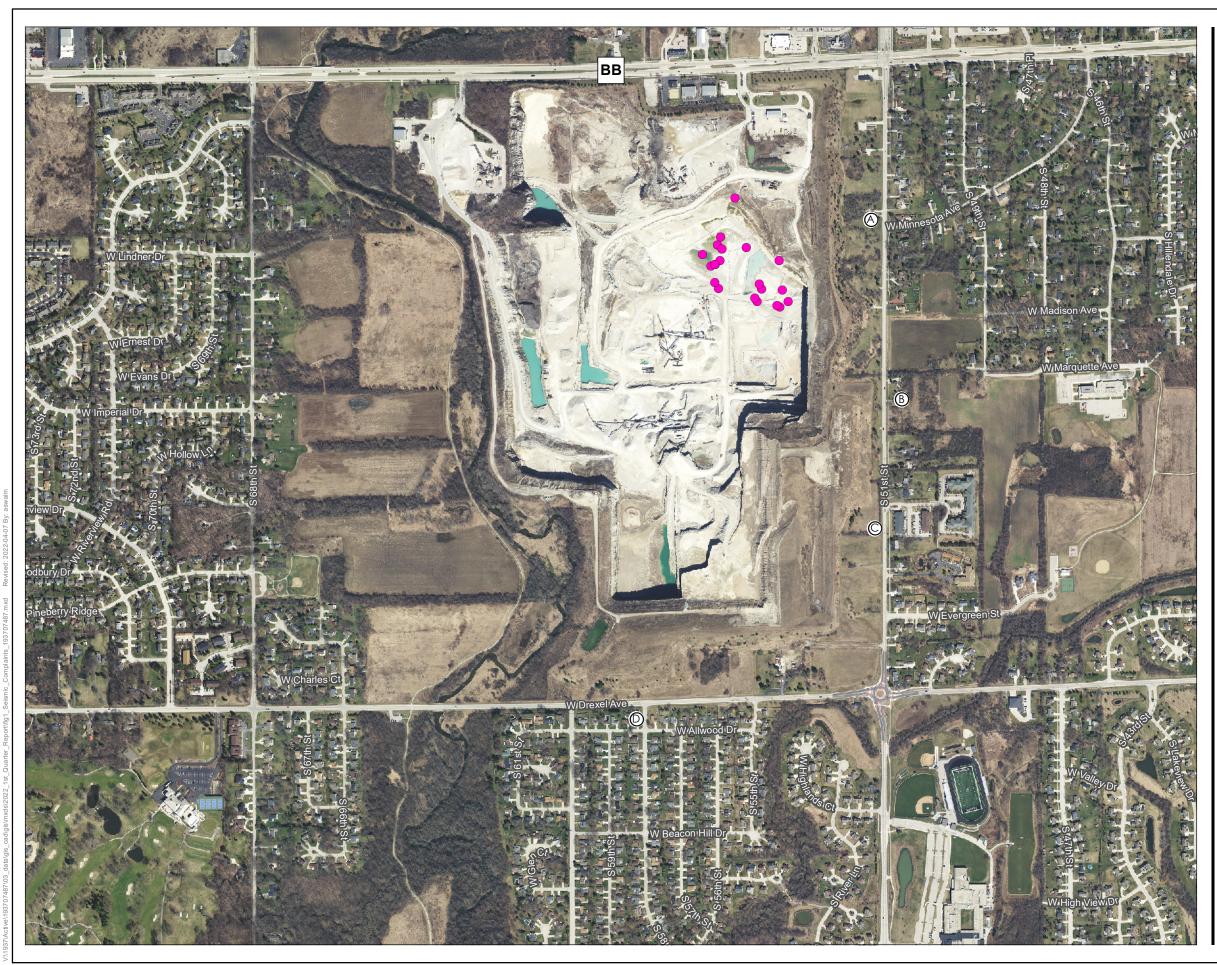
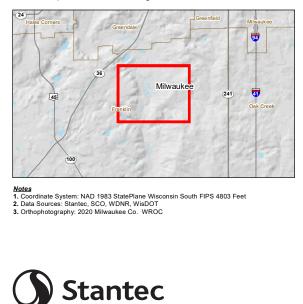


Figure No. **1** 

#### Title Seismic Monitoring, Blasting, and Complaint Locations - 1st Quarter 2022

## Client/Project City of Franklin Vicinity of Payne and Dolan Quarry 193707487 Project Location C. of Franklin, Milwaukee Co., WI Prepared by AJS on 2022-04-07 TR by JS on 2022-04-07 IR by KGI on 2022-04-07 Ν 400 800 Feet (At original document size of 11x17) 1:9,600 Legend Seismic Monitoring Location Vibra-Tech(VT1) and Stantec(S1) B Vibra-Tech(VT2) Vibra-Tech(VT3) Vibra-Tech(VT4) and Stantec(S2) Blast Location Non-complaint Blast Location\*

\*No complaints received during 1st Quarter



# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 January 2022

Time	Activity	Location	Distance	PPV	Freq	AO
1/21/2022 11:36	3	5800 ALLWOOD	3,736	N/T	N/T	N/A
1/21/2022 11:36	3	7526 S. 51st Street	1,451	0.063	26.3	115
1/21/2022 11:36	3	SE of Quarry	2,312	0.033	23.8	109
1/21/2022 11:36	3	7301 S 51st Street	1,032	0.148	35.7	112
1/13/2022 10:38	2	5800 ALLWOOD	3,755	N/T	N/T	N/A
1/13/2022 10:38	2	7526 S. 51st Street	1,286	0.103	33.3	112
1/13/2022 10:38	2	SE of Quarry	2,207	0.03	18.5	107
1/13/2022 10:38	2	7301 S 51st Street	888	0.178	45.5	108
1/6/2022 12:28	1	5800 ALLWOOD	3,709	N/T	N/T	N/A
1/6/2022 12:28	1	7526 S. 51st Street	1,426	0.163	26.3	119
1/6/2022 12:28	1	SE of Quarry	2,281	0.03	23.8	118
1/6/2022 12:28	1	7301 S 51st Street	1,038	0.183	31.3	113

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - 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. The Operator shall not exceed the airblast limitation imposed by the 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).

# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 February 2022

Time	Activity	Location	Distance	PPV	Freq	AO
2/28/2022 10:40	11	5800 ALLWOOD	3,783	N/T	N/T	N/A
2/28/2022 10:40	11	7526 S. 51st Street	1,795	0.023	10.4	110
2/28/2022 10:40	11	SE of Quarry	2,576	N/T	N/T	N/A
2/28/2022 10:40	11	7301 S 51st Street	1,305	N/T	N/T	N/A
2/21/2022 10:53	10	5800 ALLWOOD	3,959	N/T	N/T	N/A
2/21/2022 10:53	10	7526 S. 51st Street	1,920	0.045	33.3	110
2/21/2022 10:53	10	SE of Quarry	2,744	0.02	21.7	106
2/21/2022 10:53	10	7301 S 51st Street	1,290	0.093	35.7	106
2/18/2022 10:35	9	5800 ALLWOOD	3,778	0.023	8.6	110
2/18/2022 10:35	9	7526 S. 51st Street	1,501	0.068	17.2	117
2/18/2022 10:35	9	SE of Quarry	2,367	0.035	20.8	113
2/18/2022 10:35	9	7301 S 51st Street	1,032	0.123	29.4	116
2/14/2022 11:27	8	5800 ALLWOOD	3,943	N/T	N/T	N/A
2/14/2022 11:27	8	7526 S. 51st Street	1,937	0.04	33.3	110
2/14/2022 11:27	8	SE of Quarry	2,749	N/T	N/T	N/A
2/14/2022 11:27	8	7301 S 51st Street	1,321	0.095	35.7	109
2/10/2022 11:23	7	5800 ALLWOOD	3,774	N/T	N/T	N/A
2/10/2022 11:23	7	7526 S. 51st Street	1,329	0.05	25	111
2/10/2022 11:23	7	SE of Quarry	2,246	0.043	23.8	109
2/10/2022 11:23	7	7301 S 51st Street	898	0.115	55.6	107
2/8/2022 10:54	6	5800 ALLWOOD	3,763	N/T	N/T	N/A
2/8/2022 10:54	6	7526 S. 51st Street	1,477	0.055	33.3	116
2/8/2022 10:54	6	SE of Quarry	2,342	0.03	20.8	112
2/8/2022 10:54	6	7301 S 51st Street	1,026	0.183	35.7	111
2/4/2022 10:33	5	5800 ALLWOOD	4,021	N/T	N/T	N/A
2/4/2022 10:33	5	7526 S. 51st Street	2,052	0.053	38.5	111
2/4/2022 10:33	5	SE of Quarry	2,864	N/T	N/T	N/A
2/4/2022 10:33	5	7301 S 51st Street	1,389	0.113	38.5	106
2/2/2022 11:50	4	5800 ALLWOOD	3,774	N/T	N/T	N/A
2/2/2022 11:50	4	7526 S. 51st Street	1,300	0.07	45.5	109
2/2/2022 11:50	4	SE of Quarry	2,226	0.033	27.8	108
2/2/2022 11:50	4	7301 S 51st Street	877	0.1	31.3	106

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - 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. The Operator shall not exceed the airblast limitation imposed by the 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).

# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 March 2022

Time	Activity	Location	Distance	PPV	Freq	AO
3/29/2022 12:49	21	5800 ALLWOOD	3,669	N/T	N/T	N/A
3/29/2022 12:49	21	7526 S. 51st Street	1,172	0.18	26.3	110
3/29/2022 12:49	21	SE of Quarry	2,085	0.07	23.8	96
3/29/2022 12:49	21	7301 S 51st Street	912	0.188	33.3	106
3/25/2022 12:02	20	5800 ALLWOOD	3,675	N/T	N/T	N/A
3/25/2022 12:02	20	7526 S. 51st Street	1,775	0.035	21.7	114
3/25/2022 12:02	20	SE of Quarry	2,510	N/T	N/T	N/A
3/25/2022 12:02	20	7301 S 51st Street	1,375	N/T	N/T	N/A
3/22/2022 10:29	19	5800 ALLWOOD	3,825	N/T	N/T	N/A
3/22/2022 10:29	19	7526 S. 51st Street	1,855	0.058	25	112
3/22/2022 10:29	19	SE of Quarry	2,638	0.023	16.7	104
3/22/2022 10:29	19	7301 S 51st Street	1,331	0.058	10.6	119
3/17/2022 10:15	18	5800 ALLWOOD	3,946	N/T	N/T	N/A
3/17/2022 10:15	18	7526 S. 51st Street	1,879	0.04	11.6	126
3/17/2022 10:15	18	SE of Quarry	2,709	N/T	N/T	N/A
3/17/2022 10:15	18	7301 S 51st Street	1,256	0.058	23.8	121
3/14/2022 11:43	17	5800 ALLWOOD	4,044	N/T	N/T	N/A
3/14/2022 11:43	17	7526 S. 51st Street	1,952	0.035	38.5	110
3/14/2022 11:43	17	SE of Quarry	2,803	N/T	N/T	N/A
3/14/2022 11:43	17	7301 S 51st Street	1,256	0.098	45.5	109
3/10/2022 11:28	16	5800 ALLWOOD	3,979	N/T	N/T	N/A
3/10/2022 11:28	16	7526 S. 51st Street	1,934	0.05	31.3	112
3/10/2022 11:28	16	SE of Quarry	2,762	N/T	N/T	N/A
3/10/2022 11:28	16	7301 S 51st Street	1,289	0.085	27.8	106
3/8/2022 12:15	15	5800 ALLWOOD	3,978	N/T	N/T	N/A
3/8/2022 12:15	15	7526 S. 51st Street	1,479	0.028	4.5	110
3/8/2022 12:15	15	SE of Quarry	2,445	N/T	N/T	N/A
3/8/2022 12:15	15	7301 S 51st Street	807	0.11	9.6	111
3/4/2022 11:15	14	5800 ALLWOOD	3,999	N/T	N/T	N/A
3/4/2022 11:15	14	7526 S. 51st Street	1,739	0.028	25	114
3/4/2022 11:15	14	SE of Quarry	2,635	N/T	N/T	N/A
3/4/2022 11:15	14	7301 S 51st Street	1,055	0.065	45.5	108
3/3/2022 10:45	13	5800 ALLWOOD	3,854	N/T	N/T	N/A
3/3/2022 10:45	13	7526 S. 51st Street	1,832	0.025	25	118
3/3/2022 10:45	13	SE of Quarry	2,635	N/T	N/T	N/A
3/3/2022 10:45	13	7301 S 51st Street	1,284	0.035	38.5	110
3/1/2022 10:37	12	5800 ALLWOOD	4,398	N/T	N/T	N/A
3/1/2022 10:37	12	7526 S. 51st Street	2,108	N/T	N/T	N/A
3/1/2022 10:37	12	SE of Quarry	3,057	N/T	N/T	N/A
3/1/2022 10:37	12	7301 S 51st Street	1,160	0.055	14.7	116

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - 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. The Operator shall not exceed the airblast limitation imposed by the 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).

# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 April 2022

Time	Activity	Location	Distance	PPV	Freq	AO
4/28/2022 13:01	30	5800 ALLWOOD	3,210	N/T	N/T	N/A
4/28/2022 13:01	30	7526 S. 51st Street	896	0.113	33.3	106
4/28/2022 13:01	30	SE of Quarry	1,604	0.03	33.3	93
4/28/2022 13:01	30	7301 S 51st Street	1,284	0.17	38.5	98
4/21/2022 11:21	29	5800 ALLWOOD	3,546	N/T	N/T	N/A
4/21/2022 11:21	29	7526 S. 51st Street	1,012	0.115	41.7	110
4/21/2022 11:21	29	SE of Quarry	1,908	0.023	20	96
4/21/2022 11:21	29	7301 S 51st Street	974	0.083	41.7	96
4/19/2022 12:13	28	5800 ALLWOOD	3,690	N/T	N/T	N/A
4/19/2022 12:13	28	7526 S. 51st Street	1,129	0.183	21.7	117
4/19/2022 12:13	28	SE of Quarry	2,067	0.06	16.1	109
4/19/2022 12:13	28	7301 S 51st Street	867	0.175	45.5	106
4/18/2022 10:00	27	5800 ALLWOOD	2,939	N/T	N/T	N/A
4/18/2022 10:00	27	7526 S. 51st Street	2,208	N/T	N/T	N/A
4/18/2022 10:00	27	SE of Quarry	2,478	N/T	N/T	N/A
4/18/2022 10:00	27	7301 S 51st Street	2,279	, N/T	, N/T	, N/A
4/12/2022 10:48	26	5800 ALLWOOD	3,843	, N/T	, N/T	, N/A
4/12/2022 10:48	26	7526 S. 51st Street	1,491	0.095	29.4	107
4/12/2022 10:48	26	SE of Quarry	2,391	0.03	18.5	98
4/12/2022 10:48	26	7301 S 51st Street	959	0.168	35.7	101
4/11/2022 12:30	25	5800 ALLWOOD	3,657	N/T	N/T	N/A
4/11/2022 12:30	25	7526 S. 51st Street	1,067	0.163	21.7	112
4/11/2022 12:30	25	SE of Quarry	2,007	0.05	20.8	99
4/11/2022 12:30	25	7301 S 51st Street	876	0.12	55.6	108
4/7/2022 12:32	24	5800 ALLWOOD	3,773	N/T	N/T	N/A
4/7/2022 12:32	24	7526 S. 51st Street	1,481	0.11	27.8	114
4/7/2022 12:32	24	SE of Quarry	2,351	0.035	25	111
4/7/2022 12:32	24	7301 S 51st Street	1,019	0.155	33.3	109
4/4/2022 13:47	23	5800 ALLWOOD	3,672	N/T	N/T	N/A
4/4/2022 13:47	23	7526 S. 51st Street	1,219	0.195	25	112
4/4/2022 13:47	23	SE of Quarry	2,119	0.088	25	99
4/4/2022 13:47	23	7301 S 51st Street	934	0.183	38.5	106
4/1/2022 12:14	22	5800 ALLWOOD	3,795	N/T	N/T	N/A
4/1/2022 12:14	22	7526 S. 51st Street	1,457	0.13	29.4	114
4/1/2022 12:14	22	SE of Quarry	2,344	0.033	20.8	111
4/1/2022 12:14	22	7301 S 51st Street	977	0.11	23.8	107

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - 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. The Operator shall not exceed the airblast limitation imposed by the 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).



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Scalen.					
Date	Time	Shot #	Seismo Loc	PPV	AO
5/10/2022	10:40 am	32	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
5/10/2022	10:37 am	32	Franklin Quarry (7301 S 51st Street)	0.068	106
5/10/2022	10:37 am	32	Franklin Quarry (7526 S. 51st Street)	0.158	108
5/10/2022	10:37 am	32	Franklin Quarry (SE of Quarry)	0.035	95
5/05/2022	11:45 am	31	Franklin Quarry (7301 S 51st Street)	N/T	N/T
5/05/2022	11:49 am	31	Franklin Quarry (5800 ALLWOOD)	0.068	114
5/05/2022	11:49 am	31	Franklin Quarry (7526 S. 51st Street)	0.125	112
5/05/2022	11:49 am	31	Franklin Quarry (SE of Quarry)	0.145	114
4/28/2022	1:00 pm	30	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
4/28/2022	1:01 pm	30	Franklin Quarry (7301 S 51st Street)	0.170	98

Showing 1 to 10 of 356 entries FirstPrevious12345...36NextLast Franklin Quarry

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