

<p>APPROVAL</p> <p><i>Slw</i></p>	<p>REQUEST FOR COUNCIL ACTION</p>	<p>MEETING DATE</p> <p>09/09/2014</p>
<p>REPORTS & RECOMMENDATIONS</p>	<p>REVIEW OF THE PROFESSIONAL SERVICES AGREEMENT BETWEEN THE CITY OF FRANKLIN AND STANTEC CONSULTING SERVICES INC. FOR QUARRY MONITORING SERVICES</p>	<p>ITEM NUMBER</p> <p><i>G.S.</i></p>

At its August 14, 2014 meeting, the Quarry Monitoring Committee approved a motion to contact Stantec Consulting Services Inc. to request that they provide the City an estimated budget for a renewed quarry monitoring contract for 2015 incorporating the changes identified by the Quarry Monitoring Committee. Those proposed changes are summarized in the attached staff report to the Plan Commission dated August 21, 2014.

At its August 21, 2014 meeting, the Plan Commission approved a motion to refer the Professional Services Agreement with Stantec Consulting Services Inc. for quarry monitoring services to the Common Council without a recommendation. A copy of the previously approved 2012 - 2013 contract is attached. The Plan Commission also approved a motion to attach the Quarry Air Monitoring Report prepared by Stantec Consulting Services Inc. to the report on the 'Review of the Professional Services Agreement Between the City of Franklin and Stantec Consulting Services Inc. for Quarry Monitoring Services' for Common Council review.

COUNCIL ACTION REQUESTED

As the Common Council deems appropriate.



CITY OF FRANKLIN



REPORT TO THE PLAN COMMISSION

Meeting of August 21, 2014

**Review of the Professional Services Agreement between the City of Franklin
and Stantec Consulting Services Inc. for Quarry Monitoring Services**

RECOMMENDATION: City Development staff recommends that this matter be forwarded to the Common Council for its consideration.

Project Name:	Review of the Professional Services Agreement between the City of Franklin and Stantec Consulting Services Inc. for Quarry Monitoring Services
Project Address:	Approximately 6211 West Rawson Avenue
Applicant:	City of Franklin Quarry Monitoring Committee
Property Owner:	Payne & Dolan, Inc.
Current Zoning:	Planned Development District No. 23, FW Floodway District, FFO Floodplain Fringe Overlay District
2025 Comprehensive Plan:	Industrial, Residential, Commercial, Areas of Natural Resource Features
Use of Surrounding Properties:	PDD No. 24 (Vulcan Limestone Quarry) and residential lands to the east, residential to the south, natural resources, agricultural, and residential to the west, and commercial and natural resources to the north
Applicant's Action Requested:	That the Plan Commission take the Quarry Monitoring Committee's recommendations under consideration

INTRODUCTION:

At its April 16, 2013 meeting, the Common Council approved a motion to "authorize the contract with Stantec Consulting Services Inc. for \$41,300 as identified in the Professional Services Agreement to be executed, as to be modified in accordance with the staff recommendation in the Common Council Action Sheet, subject to finalization of the site visit costs not to exceed \$41,300, and City Attorney approval of boilerplate language."

The work authorized by the subject contract has now been completed (except for certain final reports to be submitted shortly) and the contract has subsequently expired on August 13, 2014.

PROJECT DESCRIPTION:

At its August 14, 2014 meeting, the Quarry Monitoring Committee approved a motion to "Contact Stantec Consulting Services Inc. to request that they provide the City an estimated

budget for a renewed quarry monitoring contract for 2015 incorporating the changes identified by the Quarry Monitoring Committee.”

The most significant change recommended by the Quarry Monitoring Committee consisted of the reallocation of approximately half of the funds identified in the previous contract for Air Quality Monitoring to Blast Monitoring (an amount to be equal to four weeks of blast monitoring), and the remainder of the Air Quality Monitoring funds to be reallocated to Quarry Operations Monitoring (for additional site visits and expanded air quality observations). See Attachment A – Part 1 of the Stantec contract.

The Quarry Monitoring Committee also recommended:

- That the Blast Monitoring include a compilation and review of all applicable quarry related complaints.
- That the City consider purchase of an air quality monitor.
- That additional weather related data be provided as part of the site visits and air quality observations associated with the Quarry Operations Monitoring.
- That the contract include a comprehensive year end summary.

CONCLUSION:

The Quarry Monitoring Committee is aware that Common Council review and approval is necessary before any decision or action takes place on this matter. In the meantime, the Quarry Monitoring Committee is requesting Plan Commission consideration of this matter at this time.

PROFESSIONAL SERVICES AGREEMENT

This PROFESSIONAL SERVICES AGREEMENT (hereinafter "AGREEMENT"), made and entered into this 5th day of July, 2013, between the City of Franklin, 9229 West Loomis Road, Franklin, Wisconsin 53132 (hereinafter "the CITY") and Stantec Consulting Services Inc. (hereinafter "the CONTRACTOR"), whose principal place of business is 12075 Corporate Parkway, Suite 200, Mequon, Wisconsin 53092.

WITNESSETH

WHEREAS, the CONTRACTOR is duly qualified and experienced as a quarry monitoring service contractor and has offered services for the purposes specified in this AGREEMENT; and

WHEREAS, in the judgment of the CITY, it is necessary and advisable to employ the CONTRACTOR in connection with providing quarry monitoring services, as described in Attachment A, for the City of Franklin.

NOW, THEREFORE, in consideration of these premises and the following mutual covenants, terms, and conditions, the CITY and the CONTRACTOR agree as follows:

I. BASIC SERVICES AND AGREEMENT ADMINISTRATION

- A. The CONTRACTOR shall provide services to the CITY for the quarry monitoring activities specified in Attachment A, including both Part 1 and Part 2, which is attached and incorporated herein by reference.
- B. The CONTRACTOR shall serve as the CITY's professional representative in matters to which this AGREEMENT applies. The CONTRACTOR may employ the services of outside consultants and subcontractors when deemed necessary by the CONTRACTOR to complete work under this AGREEMENT following approval by the City for each such type of use.
- C. The CONTRACTOR is an independent contractor and all persons furnishing services hereunder are employees of, or independent subcontractors to, the CONTRACTOR and not of the CITY. All obligations under the Federal Insurance Contribution Act (FICA), the Federal Unemployment Tax Act (FUTA), and income tax withholding are the responsibility of the CONTRACTOR as employer. The CITY understands that express agreements may exist between the CONTRACTOR and its employees regarding extra work, competition, and nondisclosure.

II. FEES AND PAYMENTS

The CITY agrees to pay the CONTRACTOR, as set forth in Attachment A- Part 1, for and in consideration of the performance of Services as set forth in Attachment A Parts 1 and 2, except as such services and fees may otherwise be amended in accordance with and as provided for by the terms of this agreement.

- A. The CONTRACTOR shall invoice the CITY at least quarterly but not more than once monthly for and following performance of services and delivery of required reports to the City. The invoice shall include base costs and any adjustment for additional services as provided for herein. The CITY shall pay any undisputed invoices within 30 days of receipt. Alternatively, the CITY shall notify the CONTRACTOR of any dispute to an invoice, and the nature of the dispute, within 30 days of receipt of the invoice.
- B. In consideration of the faithful performance of this AGREEMENT, the CONTRACTOR will not exceed the fee for Services without written authorization from the CITY to perform work over and above that described in this original AGREEMENT, including Attachment A Parts 1 and 2..
- C. Should the CITY find deficiencies in work performed or reported, it will notify the CONTRACTOR in writing within thirty (30) days of receipt of invoice and related report and the CONTRACTOR will remedy the deficiencies within thirty (30) days of receiving the CITY's notice, which period may be extended by mutual agreement of the CONTRACTOR and the CITY's Planning Manager. This Subsection shall not be construed to be a limitation of any rights or remedies otherwise available to the CITY.

III. MODIFICATION AND ADDITIONAL SERVICES

- A. This AGREEMENT may only be amended by written instrument signed by both the CITY and the CONTRACTOR.
- B. The CITY may, in writing, request changes in the scope of work required to be performed by the CONTRACTOR under this AGREEMENT. Upon acceptance of the request of such changes, the CONTRACTOR shall submit a "Change Order Request Form" to the CITY for authorization, notice to proceed, and signature. Following execution the City shall return a copy to the CONTRACTOR. Should any such changes be made, an equitable adjustment (based upon fees, costs, and rates set forth in Attachment A and/or CONTRACTOR's original written response to the RFP, where applicable) will be made to compensate the CONTRACTOR or reduce the fixed price, for any incremental or decremental labor or direct costs, respectively. Any claim by the CONTRACTOR for adjustments hereunder must be made to the CITY in writing no later than forty-

five (45) days after receipt by the CONTRACTOR of notice of such changes from the CITY.

IV. ASSISTANCE AND CONTROL

- A. Michael Roznowski, Associate, Industrial Team Leader, will serve as Project Manager and will coordinate the work of the CONTRACTOR, and will be solely responsible for communication within the CITY's organization as related to all issues originating under this AGREEMENT.
- B. Joel Dietl, Planning Manager, will serve as the representative of the City for all issues relating to administration of this AGREEMENT

V. TERMINATION

- A. This AGREEMENT may be terminated by either party to this AGREEMENT upon thirty (30) days written notice. Upon such termination by the CITY, the CONTRACTOR shall be entitled to payment of such amount as shall fairly compensate the CONTRACTOR for all work approved and completed up to the date of termination, except that no amount shall be payable for any losses of revenue or profit from any source outside the scope of this AGREEMENT, including but not limited to, other actual or potential AGREEMENTS for services with other parties.
- B. In the event that this AGREEMENT is terminated for any reason, the CONTRACTOR shall deliver to the CITY all data, reports, summaries, correspondence, and other written, printed, or tabulated material pertaining in any way to services that the CONTRACTOR may have accumulated. Such material is to be delivered to the CITY whether in completed form or in process.
- C. The rights and remedies of the CITY and the CONTRACTOR under this section are not exclusive and are in addition to any other rights and remedies provided by law or appearing in any other article of this AGREEMENT.
- D. Failure to maintain the designated staff (as identified herein and in CONTRACTOR'S original response to the RFP) or such similarly qualified staff as determined by the City may lead to termination of the agreement, as determined by the City.

VI. INSURANCE

The CONTRACTOR shall, during the life of the AGREEMENT, maintain insurance coverage, with an authorized insurance carrier operating within the State of Wisconsin, at least equal to the minimum limits set forth below:

- | | |
|--|-------------|
| A. Limit of General/Commercial Liability | \$2,000,000 |
| B. Automobile Liability: Bodily Injury/Property Damage | \$1,000,000 |

- C. Excess Liability for General Commercial or Automobile Liability \$3,000,000
- D. Worker's Compensation and Employers' Liability \$500,000 or per statute
whichever is greater
- E. Professional Liability \$1,000,000

Upon the execution of this AGREEMENT, the CONTRACTOR shall supply the CITY with a suitable statement certifying said protection and defining the terms of the policy issued, which shall specify that such protection shall not be cancelled without thirty (30) calendar days prior notice to the CITY, and naming the CITY as an additional insured for General Liability.

VII. INDEMNIFICATION AND ALLOCATION OF RISK

- A. To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the CITY and the CITY's officers, directors, partners, and employees from and against costs, losses, and damages (including but not limited to reasonable fees and charges of engineers, architects, attorneys, and other professionals, and reasonable court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of the CONTRACTOR or the CONTRACTOR's officers, directors, partners, employees, and consultants in the performance of the CONTRACTOR's services under this AGREEMENT.
- B. To the fullest extent permitted by law, the CITY shall indemnify and hold harmless the CONTRACTOR and the CONTRACTOR's officers, directors, partners, employees, and consultants from and against costs, losses, and damages (including but not limited to reasonable fees and charges of engineers, architects, attorneys, and other professionals, and reasonable court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of the CITY or the CITY's officers, directors, partners, employees, and consultants with respect to this AGREEMENT.
- C. To the fullest extent permitted by law, the CONTRACTOR's total liability to the CITY and anyone claiming by, through, or under the CITY for any injuries, losses, damages and expenses caused in part by the negligence of the CONTRACTOR and in part by the negligence of the CITY or any other negligent entity or individual, shall not exceed the percentage share that the CONTRACTOR's negligence bears to the total negligence of the CITY, the CONTRACTOR, and all other negligent entities and individuals.
- D. Nothing contained within this agreement is intended to be a waiver or estoppels of the contracting municipality or its insurer to be entitled to and/or to rely upon the limitations, defenses, and immunities contained within Wisconsin law, including those contained within Wisconsin Statutes 893.80, 895.52, and 345.05. To the extent that indemnification is available and enforceable, the municipality or its insurer shall not be liable in indemnity or contribution for an amount greater than the limits of liability for municipal claims established by Wisconsin Law.

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VIII. TERM AND TIME FOR COMPLETION

- A. The initial term of this agreement shall be thirteen months from receipt of a Notice to Proceed. The term anticipates monitoring and at-quarry work occurs for 12 months, thereby leaving one month to compile, report, and present results for the final period and to provide any such required summary information and recommendations.
- B. In order to enable the City to evaluate its complete quarry monitoring program and to consider altering the scope of work required for future years, the initial term may be extended for a period and for terms as mutually agreed to in writing by the CITY and the CONTRACTOR. Each such subsequent term may also be extended for a period and for terms as mutually agreed to in writing by the CITY and the CONTRACTOR.
- C. The CONTRACTOR shall commence immediately upon receipt of a Notice to Proceed.

IX. DISPUTES

This AGREEMENT shall be construed under and governed by the laws of the State of Wisconsin. The venue for any actions arising under this AGREEMENT shall be the Circuit Court for Milwaukee County. The prevailing party shall be awarded its actual costs of any such litigation, including reasonable attorney fees.

X. RECORDS RETENTION

The CONTRACTOR shall maintain all records pertaining to this AGREEMENT during the term of this AGREEMENT and for a period of not less than three (3) years following its completion. Such records shall be made available by the CONTRACTOR to the CITY for inspection and copying upon request.

XI. CONFLICT OF INTEREST

The nature of this project requires an impartial, unbiased approach on the part of the CONTRACTOR. The CONTRACTOR shall not, during the performance of these services, engage in any other professional relationship or representation that would create any type of conflict or conflict of interest with regard to the consulting services provided hereby to and for the CITY.

Further, the CONTRACTOR warrants that neither it nor any of its affiliates has any financial or other personal interest that would conflict in any manner with the performance of the services under this AGREEMENT and that neither it nor any of its affiliates will acquire directly or indirectly any such interest. The CONTRACTOR warrants that it will immediately notify the CITY if any actual or potential conflict of interest arises or becomes known to the

CONTRACTOR. Upon receipt of such notification, a review and written approval by the CITY is required for the CONTRACTOR to continue to perform work under this AGREEMENT.

XII. PROFESSIONALISM

The CONTRACTOR stipulates that the same degree of care, skill and diligence shall be exercised in the performance of the services as is possessed and exercised by a member of the same profession, currently practicing, under similar circumstances, and all persons providing such services under this AGREEMENT shall have such active certifications, licenses and permissions as may be required by law.

XIII. PURSUANT TO LAW

Notwithstanding anything to the contrary anywhere else set forth within this AGREEMENT, all services and any and all materials and/or products provided by the CONTRACTOR under this AGREEMENT shall be in compliance with all applicable governmental laws, statutes, decisions, codes, rules, orders, and ordinances, be they Federal, State, County or Local.

IN WITNESS WHEREOF, the parties have caused this AGREEMENT to be executed on the day and year first above written.

CITY OF FRANKLIN, WISCONSIN

BY: Thomas M. Taylor

PRINT NAME: Thomas M. Taylor

TITLE: Mayor

DATE: 07/05/2013

CONTRACTOR

BY: Dave Rautmann

PRINT NAME: DAVE RAUTMANN

TITLE: PRINCIPAL

DATE: 7/18/13

BY: Sandra L. Wesolowski

PRINT NAME: SANDRA L. WESOLOWSKI

TITLE: DIR. OF CLERK SERVICES

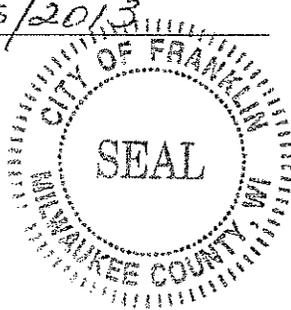
DATE: 07/05/2013

BY: Michael B. Roznowski

PRINT NAME: Michael B. Roznowski

TITLE: Associate

DATE: 07/18/2013



MBR

ATTACHMENT A – Part 1

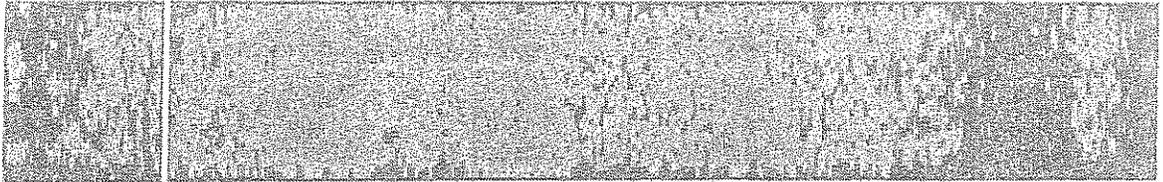
Summary of Scope of Work and Related Fees.

The scope of work summarized herein (Attachment A – Part 1) is explained in greater detail within Attachment A – Part 2. Part 1, therefore, sets forth the general scope of work initially contracted for between the CITY and CONTRACTOR, both of which are also reflected on the attached Quarry Monitoring Services Table, and the related fees, while Part 2 provides greater detail on the nature and execution of such work and provides some alternative and additional service provision options for the CITY's consideration.

1. Blast Monitoring, Data Collection, and Evaluation [7 weeks]			
a) Review Complaints:			Included
b) Fixed-Location Blast Monitoring with a City-provided seismograph:			Included
c) Maintain the Blast Monitor:			Included
d) Perform data collection and evaluate blast data:			Included
e) Prepare brief report/summary of blast monitoring:			Included
Cost for Scope of Work	(\$1,100 x 7)	(A)	<u>\$7,700</u>
2. Air Quality Monitoring, Data Collection, and Evaluation [1 month]			
a) Place and check on three portable air samplers:			Included
b) Observe quarry operations:			Included
c) Download, evaluate and correlate air monitoring and weather data:			Included
d) Prepare brief report/summary of air quality monitoring:			Included
e) Review complaints:			Included
Cost for Scope of Work		(B)	<u>\$13,000</u>
3. Quarry Operations Monitoring and Monitoring by Direct Observation [28 visits]			
a) Site Visits:			Included
b) Direct Air Quality Observation:			Included
c) Quarry Operations Review:			Included
Cost for Scope of Work	(\$700 x 28)	(C)	<u>\$19,600</u>
4. Public Meeting Attendance [2 meetings]			
Cost for Scope of Work	(\$500 x 2)	(D)	<u>\$1,000</u>
TOTAL BASE TOTAL COSTS (A) + (B) + (C) + (D) = (E)			<u>\$41,300</u>

[Note: "Quarry Monitoring Service Supplement to Proposal #393095", Revised May 24, 2013, and the attached Quarry Monitoring Service Table provide additional discussion on the services, selection of services, options, and methodologies, which document, Attachment A – Part 2, is incorporated herein by reference.]

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City of Franklin

1000 North Lincoln Road, Franklin, WI 53132

Attachment A – Part 2

Quarry Monitoring Services

SUPPLEMENT TO PROPOSAL #393095

City of Franklin
Office of the City Clerk
9229 West Loomis Road
Franklin, Wisconsin 53132

Original Proposal was dated: June 7, 2012
Proposal Supplement is dated: March 21, 2013
Revised: May 24, 2013

Revised June 5, 2013

 Stantec

MBC


BLAST MONITORING, DATA COLLECTION, AND EVALUATION

Weekly - Fixed-location blast monitoring and written summary report \$1,100

- o Place a fixed seismograph (City owned) at the City-established blast monitoring sites or vaults for a one-week period (8:00 am Monday through 4:00 pm Friday); If monitoring is required for consecutive weeks, the monitor may run through the weekend, but the charges may then reflect two one-week periods. (Note: The unit price listed above is per week or fraction thereof, unless otherwise agreed to. For example, if, due to a special circumstance, the City requests on a Tuesday to immediately have the monitor placed and Stantec is able to comply, the Tuesday through Friday would constitute one full one-week period. Alternatively in this example, Stantec could agree to place the seismograph on a Tuesday and pick it up the following Monday at 4:00, which would also constitute one one-week period. However, placement on a Tuesday with pickup on Wednesday of the following week would constitute two one-week periods.)
- o Maintain the seismograph and battery source (if one) to ensure it is powered for the full week;
- o Perform data collection (download) at the end of the week;
- o Evaluate blast data; and
- o Prepare brief report which will provide a summary of the fixed-location blast monitoring and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.
- o Provide recommendations regarding adverse impacts or non-compliant results.
- o The weeks and locations of blast monitor placement will be decided upon recommendation to and consultation with the City, who shall have final say in the matter.

Weekly - Mobile location blast monitoring and written summary report \$1,800

- o Place a portable seismograph (Giles owned) at City-designated blast monitoring sites for a one-week period (9:00 am Monday through 3:00 pm Friday);
- o Maintain the seismograph and battery source (if one) to ensure it is powered for the full week;
- o Download collected blast-monitoring data at the end of the week;
- o Evaluate blast data; and
- o Prepare brief report which will provide a summary of the fixed-location blast monitoring and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.
- o Provide recommendations regarding adverse impacts or non-compliant results.

Notes:

- Seismograph will be positioned at a nearby residential property, upon the resident's permission and execution of waiver obtained by the City, or within the right-of-way, or other location, upon approval of the City;
- Giles proposes the following methodology for securing and placing the seismograph at such residential locations:
 - Coordinate with City personnel the required residential location for placement of the mobile seismograph;
 - Communicate with the residential property owner via telephone to introduce ourselves and coordinate a mutually agreeable time to meet on-site during regular business hours for seismograph placement;
 - Discuss with residential property owner a mutually agreeable location for placement of the seismograph and discuss expected protocol to avoid damage to the seismograph;
 - Communicate scheduling of Giles personnel to perform on-site maintenance of the seismograph and the battery source during the course of the monitoring period; and
 - Communicate scheduling of Giles personnel to download blast monitoring data and removal of the seismograph from the site during regular business hours.

Per event - Seismograph Comparison Testing

\$ 700

- o Perform a side-by-side test at each quarry for the purpose of confirming that the City and quarries' seismographs are obtaining similar results.
- o Evaluate the results of the side-by-side tests to determine if the tests yield similar results. If tests determine that similar results are not being obtained, additional tests to reconcile or resolve any deviation between devices may be necessary (at additional expense);

1-month (option) - Review of Quarry Blasting Reports and Written Summary Report

\$ 1,750

- o Receive blasting records in electronic form from quarry personnel for one month selected by City;
- o Review the blasting records obtained for compliance with the criteria and standards of the PDD;
- o Compare the blasting records with the independent blasting records obtained from the fixed locations and the mobile locations described below; and
- o Prepare report which will provide a summary of the quarry blasting reports and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.
- o Provide recommendations regarding adverse impacts or non-compliant results.

3-month (option) - Review of Quarry Blasting Reports and Written Summary Report

\$ 4,350

- o Receive blasting records in electronic form from quarry personnel on a quarter selected by City;
- o Review the blasting records obtained for compliance with the criteria and standards of the PDD;
- o Compare the blasting records with the independent blasting records obtained from the fixed locations and the mobile locations described below; and
- o Prepare report which will provide a summary of the quarry blasting reports and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.
- o Provide recommendations regarding adverse impacts or non-compliant results.

12-month (option) - Review of Quarry Blasting Reports and Written Summary Report

\$10,550

- o Receive blasting records in electronic form from quarry personnel for one year period;
- o Review the blasting records obtained for compliance with the criteria and standards of the PDD;
- o Compare the blasting records with the independent blasting records obtained from the fixed locations and the mobile locations described below; and
- o Prepare report which will provide a summary of the quarry blasting reports and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.
- o Provide recommendations regarding adverse impacts or non-compliant results.

AIR QUALITY MONITORING, DATA COLLECTION, AND EVALUATION

Weekly - portable location air monitoring and written summary report

\$ 7,000

- o Place three portable air samplers (TSI DustTrak 8530) at City-designated air monitoring sites for a one-week period (8:00 am Monday through 4:00 pm Friday); By mutual agreement, an alternate 7 day calendar period may be used as the one week period if circumstances warrant. (For example, 8:00 a.m. Wednesday through 4:00 p.m. the following Tuesday.)
- o Check on monitors mid-week to assure proper operation;
- o Observe quarry operations from off-site for one hour in conjunction with monitor visits;
- o Download collected air-monitoring data at the end of the week; air quality monitoring will be for particulate matter (PM) with diameter of 10 micrometers or less (commonly referred to as PM10).
- o Evaluate air data;
- o Correlate air data with weather data and visual observations; and
- o Prepare brief report which will provide a summary of the air monitoring and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.

Notes:

- Periods and locations of placement will be decided upon consultation with the City. Air monitors will be positioned at nearby residential properties, upon the resident's permission and execution of waiver obtained by the City, or within the right-of-way, or other location, upon approval of the City;
- If monitoring is required for consecutive weeks, the monitors will run through the weekend;
- Each monitor will collect continuous particulate matter readings, which will be data-logged and retrieved at least weekly. One monitoring site will include a weather station, which will log precipitation, wind speed, wind direction, and temperature;
- Portable monitors will be in environmental enclosures to protect from weather;
- Monitors will be supplied with a timer and charger. Monitors will operate for about 12 hours, recharge for about one hour, and then begin monitoring again. This setup will allow the monitors to operate without daily battery changes and daily visits to the sites.
- Sampler will require direct access to a power source (110 volt), provided and/or arranged by the City and /or nearby residents or businesses to run chargers. Samplers can operate on batteries only, but Stantec would request assistance from the City on battery replacement and charging to offset daily visits to the monitors.
- By having three monitoring locations Stantec can assess the influence of weather conditions and have at least one station "downwind" at all times.
- Stantec proposes the following methodology for securing and placing the air monitors at such residential locations:
 - Coordinate with City personnel the required residential location for placement of the portable air monitor;
 - Communicate with the residential property owner via telephone to introduce ourselves and coordinate a mutually agreeable time to meet on-site during regular business hours for air monitor placement;
 - Discuss with residential property owner a mutually agreeable location for placement of the air monitor and discuss expected protocol to avoid damage to the air monitor;
 - Communicate scheduling of Stantec personnel to perform on-site maintenance of the air monitor and the battery source during the course of the monitoring period; and
 - Communicate scheduling of Stantec personnel to download air monitoring data and removal of the air monitor from the site during regular business hours.

Monthly - portable location air monitoring and written summary report

\$13,000

- o Place three portable air samplers (TSI DustTrak 8530 with CAMPSite Remote Monitoring) at City-designated air monitoring sites for a one-month period;
- o Check on monitors mid-week to assure proper operation;
- o Observe quarry operations from off-site for one hour in conjunction with monitor visits;
- o Download air-monitoring and weather data via satellite connection; air quality monitoring will be for particulate matter (PM) with diameter of 10- or less (commonly referred to as PM10).
- o Evaluate air data;
- o Correlate air data with weather data and visual observations; and
- o Prepare brief report which will provide a summary of the air monitoring and evaluation of the results relative to the requirements of the PDD.
- o Review of any citizen complaints forwarded from the city to determine any correlation to the data obtained.

Notes:

- Periods and locations of placement will be decided upon consultation with the City. Air monitors will be positioned at nearby residential properties, upon the resident's permission and execution of waiver obtained by the City, or within the right-of-way, or other location, upon approval of the City;
- Monitoring data will be uploaded through a satellite connection and be available to both Stantec and the City via a web portal (Note this is only available using the CAMPSite Remote Monitoring equipment which must be rented monthly or longer, not weekly).
- Website will be able to identify issues with the meters and send alerts relative to high level readings or issues with the monitors;
- Each monitor will collect continuous particulate matter readings. One monitoring site will include a weather station, which will log precipitation, wind speed, wind direction, and temperature;
- Portable monitors will be in environmental enclosures to protect from weather;
- Monitors will be supplied with a timer and charger. Monitors will operate for about 12 hours, recharge for about one hour, and then begin monitoring again. This setup will allow the monitors to operate without daily battery changes and daily visits to the sites.
- Sampler will require direct access to a power source (110 volt), provided and/or arranged by the City and /or nearby residents or businesses to run chargers. Samplers can operate on batteries only, but Stantec would request assistance from the City on battery replacement and charging to offset daily visits to the monitors.
- By having three monitoring locations Stantec can assess the influence of weather conditions and have at least one station "downwind" at all times.
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 - Coordinate with City personnel the required residential location for placement of the portable air monitor;
 - Communicate with the residential property owner via telephone to introduce ourselves and coordinate a mutually agreeable time to meet on-site during regular business hours for air monitor placement;
 - Discuss with residential property owner a mutually agreeable location for placement of the air monitor and discuss expected protocol to avoid damage to the air monitor;
 - Communicate scheduling of Stantec personnel to perform on-site maintenance of the air monitor and the battery source during the course of the monitoring period; and
 - Communicate scheduling of Stantec personnel to download air monitoring data and removal of the air monitor from the site during regular business hours.

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ADDITIONAL SERVICES

Per Visit - Quarry Operations Monitoring and Reporting by Direct Observation \$700

Conduct a qualitative site visit at both quarries to observe and document whether the sites are in compliance with the operation parameters defined in the PDD agreements, and to evaluate whether each quarry's general operations are consistent with best management practices employed by other quarries throughout the state and country. Site visits will be unannounced during business hours, and be conducted at a frequency agreed upon by the City. (Visits onto the property of either quarry, however, must be announced to the operators upon arrival.) The days and times of the visits will vary. Qualitative data collected will include the following:

- Visual observation of all aspects of the mining operation, including but not limited to:
 - Trucking operations, emphasizing directly adjacent off-site, in particular as it may pertain to dust issues along Rawson Avenue
 - Stormwater control and management, in particular as it may pertain to direct impacts to the Root River
 - Mining 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, including:
 - Review of quarry records pertaining to dust control measures and recordkeeping, ensuring that both quarries are 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 and to the quarries' self-reported blast levels.

The findings of each visit will be documented on a standard form, which will be developed prior to the first visit and approved by the City. To minimize labor costs, the form will be filled in by hand during each site visit, and then scanned/posted to a project FTP site for review by City officials. Stantec may also obtain photos to document site or directly adjacent off-site conditions, and when appropriate short-duration video clips (e.g., showing dust impacts).

[Note: Adding visual observation of additional aspects of the mining operation (i.e. ground vibration, air blasts, noise, and outdoor vehicle and equipment washing) to the Quarry Operations Monitoring site visits would add \$300 to the fee for this itemized service. As with any other service addition, prior written approval would be required for this added service.]

Per event - Public Meeting Attendance – Seismic (To the extent a representative of Giles is required to attend) \$ 500

- o Present and highlight, outside of normal business hours, the results of all previously prepared and submitted seismic and blasting reports.
- o Project Manager participation in this meeting shall not automatically be construed as an additional and/or simultaneous "Air Monitoring & Other Operational Conditions" public meeting attendance.

Per event - Public Meeting Attendance – Air Monitoring & Other Operational Conditions \$ 500

- o Present and highlight, outside of normal business hours, the results of all previously prepared and submitted air reports and PDD compliance evaluations.
- o General, non-technical discussion of seismic monitoring only to the extent where Giles expertise is not required.
- o Present general insights and conclusions of project management.

As needed - Out-of-Scope Services standard time-and-material rates

- o In conjunction with the blast and air monitoring tasks, along with the operational monitoring, assess whether each quarry is in compliance with other rules and regulations that may affect the local citizens. The primary focus will be on the blasting described in the PDDs. (Note: It is assumed that the Quarry Monitoring Committee will perform this task to reduce fees.)
- o Since interim written reports will be provided following each "menu event" chosen by the City, an annual summary report is not likely necessary. If the City would still prefer to receive one, the scope of this deliverable would need to be determined by the City and a separate cost estimate can be prepared by Stantec.
- o Additional written reports or services as requested by the city.
- o Investigation of significant anomalies between fixed location blast monitoring and the quarries' self-reported blast levels.

As needed - Additional Services included within the initial scope of services no charge

- o Notify the City Planning Manager of any condition (pertaining to blasting, air monitoring, noise or other PDD condition) that we become aware of that exceeds the allowances outlined in the PDD. This will be completed prior to noon the business day following the day we become aware of such event.
- o As needed telephone or email interaction with City staff during regular business hours.

SUPPLEMENTAL SCOPE OF QUARRY MONITORING SERVICES

SCOPE OF WORK OPTIONS AND ASSOCIATED COST

The following scope of work items, each with their own associated professional fee, is offered to the City by the combined team of Stantec and Giles. Several of the items are options and are meant to be chosen by the City, thus they are not meant to represent a scope of work matching that which was requested in the city's original RFP. Instead, they are offered individually so that the city can pick and choose which options best meet their overall needs. More detailed descriptions to these individual tasks are outlined following this introduction.

BLAST MONITORING, DATA COLLECTION, AND EVALUATION

Weekly - fixed-location blast monitoring and written summary report	\$ 1,100
Weekly - mobile location blast monitoring and written summary report	\$ 1,800
Per event - seismograph comparison testing	\$ 700
1-month period - review of quarry blasting reports and written summary report	\$ 1,750
3-month period - review of quarry blasting reports and written summary report	\$ 4,350
12-month period - review of quarry blasting reports and written summary report	\$10,550

AIR QUALITY MONITORING, DATA COLLECTION, AND EVALUATION

Weekly - portable location air monitoring and written summary report	\$ 7,000
Monthly - portable location air monitoring and written summary report	\$13,000

ADDITIONAL SERVICES

Per Visit - quarry operations monitoring and reporting by direct observation	\$ 700
Per event - public meeting attendance – seismic	\$ 500
Per event - public meeting attendance – air monitoring & operational conditions	\$ 500
As-requested – additional reports or services	T&M
Communication with City regarding potential PDD noncompliance issues	no charge
Additional communication with City as necessary (during business hours)	no charge

EXAMPLE SELECTIONS

Provided is a spreadsheet which shows conceptually how the City can pick and choose from the above items to meet their required budget, and it reflects the initial selection of the City. As described above and as shown on the sample provided, there is simply not enough budget to allow all of the items in the original RFP or the revised RFP. Thus, the City and Stantec will need to preselect certain weeks/months or other time periods to conduct blast work, air monitoring, report writing, or other specific tasks. Not all tasks need to be decided at the start of the contract; certain tasks can be selected as the year progresses based on extenuating circumstances (e.g., resident complaints; results of direct observations; changes in operational conditions; weather; etc.). Stantec simply needs sufficient time to ensure proper equipment is available.

NOTES OF INTEREST

We anticipate we will need to meet with City officials and/or members of the Quarry Monitoring Committee to discuss this alternative proposal and task breakdown. Additional items for clarification purposes include the following:

- We did not include an annual report in our task offerings. Instead, we included a brief summary report at the end of each week of blast monitoring, each week or month of air monitoring, each quarry operations visit, and each period of review of blasting reports. With a written report prepared following each specific task, an annual report would simply be a reiteration of observations and sampling results previously submitted.
- Note that the previous City RFP requested the use of a single PM10 air sampler that uses pre-weighed filters and provides a 24-hour composite result. When operated and located in accordance with USEPA requirements, this equipment can provide proof that the ambient air quality standards are or are not being met. A similar station was operated by WDNR for years in Franklin and the results of this data were unsatisfactory to the city residents. The data set is not fine-tuned enough to provide the detail needed to identify issues. Many times a single station will undoubtedly be in the wrong place at the wrong time to obtain a proper evaluation. Also with a single station, the ability to differentiate between the quarries and other non-quarry activities such as construction is limited.

Based on this, Stantec has chosen alternative equipment that is most commonly used for detailing particulate exposures at industrial sites. The air sampling equipment will provide "real time" data. This will allow the City to evaluate short-duration incidents that may occur during gusting winds or when a un-tarped truck travels past a sampling location. Combining real-time data with visual observations and citizen input can allow the team to identify the root causes of local dust issues. Instead of a single data point being generated on each day of sampling, a real-time sampler can collect multiple data points each minute of each day. Trends can be identified, such as time of day issues, or corresponding weather conditions that lead to city concerns. The end goal is to identify specific issues and to work with the quarries to find solutions. Without this detail the quarries will fall back to the fact that the ambient air quality standards are not being violated and no improvements will be identified.

- Also note that the air sampling consists of having three monitoring locations. This allows Stantec to assess the influence of weather conditions and have at least one or two stations "downwind" and conversely "upwind" at all times. This is critical in an evaluation such as this. Reduction of the three air samplers down to only one, such as was described in the original RFP, will not result in significant cost-savings and will have a nominal change to the quoted fees. Though some equipment charges might be saved, the labor/time/mileage to mobilize to and from the site(s) will be necessary regardless of the number of monitors used for the week/month and the total savings will be minor.
- A question was raised pertaining to the city purchasing a hand-held dust monitor in order to facilitate rapid response on-site dust evaluations by a city employee. It is currently Stantec's policy not to own such equipment, since by renting we are provided properly cleaned and calibrated equipment to best meet our client's needs for each project in which we need such equipment. However, if the city feels they will utilize such equipment on a regular basis, this can certainly be a viable option to consider.

Note that the monthly portable location air monitoring we are quoting in Attachment A utilizes three portable air samplers (TSI DustTrak 8530). The TSI DustTrak 8530 is an example of such a handheld device that could be purchased by the City. We estimate the cost for such a sampler may be approximately \$4,500, with additional potentially desirable components being extra (e.g., weatherproof case \$1,350; tripod, automatic recharging). There are other portable samplers on the market, including those from Greenlight Systems; we expect they have similar capabilities and costs.

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By owning a monitor, the City could respond quickly to complaints or locally identified issues throughout the year. However, the City will be responsible for maintaining, cleaning, calibrating and charging the unit to have it available. Should Stantec be asked to assist on a quick turn basis, this assistance can be provided on a T&M basis outside the contracted scope of work.

The City-owned unit could be used as part of the weekly or monthly monitoring program, but it would need to have the enclosure and ability to automatically recharge, so it could remain unaffected by weather and not cause Stantec to make additional visits to download data and recharge or replace batteries. For the monthly program, Stantec is envisioning having the data uploaded automatically through a system such as the Ashtead Monitoring CAMPSite Remote Monitoring program. If the City-owned unit is utilized, the vendor may or may not allow connection to the system. This issue will need to be explored.

Until the unit is purchased and both the City and Stantec agree on how it will be incorporated into the weekly or monthly sampling, it is not possible to enumerate a "savings" at this point. We believe this can be resolved quickly when the time comes.

MAR

City of Franklin, WI - Quarry Monitoring Services Table
2013

Date of most current version: May 15,

Comments: These are the work scope items that have been approved by the city and their corresponding fees. Dates of completion have not yet been proposed or decided.

Task	Fee	Period	Q1	Q2	Q3	Q4	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Subtotal
BLAST MONITORING, DATA COLLECTION, AND EVALUATION															
Fixed-location blast monitoring and written summary report	\$1,100	Week	7												\$7,700
Mobile location blast monitoring and written summary report	\$1,800	Week													
Seismograph Comparison Testing	\$700	Event													
Review of quarry blasting reports and written summary report	\$1,750	1 month													
Review of quarry blasting reports and written summary report	\$4,550	3 month													
Review of quarry blasting reports and written summary report	\$10,550	12 month													
AIR QUALITY MONITORING, DATA COLLECTION, AND EVALUATION															
Portable location air monitoring and written summary report	\$7,000	Week													
Portable location air monitoring and written summary report	\$13,000	1 month	1												\$13,000
ADDITIONAL SERVICES															
Quarry Operations Monitoring and Reporting by Direct Observer	\$700	Event	20												\$19,600
Public Meeting Attendance - Seismic	\$500	Event	1												\$500
Public Meeting Attendance - Air Monitoring & Other Operational Conditions	\$500	Event	1												\$500
OUT-OF-SCOPE SERVICES															
P2D Compliance Assistance or Other Areas as Requested	T&M	Event													
Notification of Exceedances and Communication with City Staff	no charge	Event													no charge
														ANNUAL TOTAL	\$41,300

Stat/tec

Quarry Monitoring Services Council
City of Franklin
May 2013

WMBR
[Signature]



CITY OF FRANKLIN



REPORT TO THE PLAN COMMISSION

Meeting of August 21, 2014

**Quarry Air Monitoring Report Prepared by Stantec Consulting Services, Inc. for the
Period of October 2013 through November 2013**

RECOMMENDATION: City Development staff recommends that this information be forwarded to the Common Council for its consideration.

Project Name:	Quarry Air Monitoring Report Prepared by Stantec Consulting Services, Inc. for the Period of October 2013 through November 2013
Project Address:	Approximately 6211 West Rawson Avenue
Applicant:	City of Franklin Quarry Monitoring Committee
Property Owner:	Payne & Dolan, Inc.
Current Zoning:	Planned Development District No. 23, FW Floodway District, FFO Floodplain Fringe Overlay District
2025 Comprehensive Plan:	Industrial, Residential, Commercial, Areas of Natural Resource Features
Use of Surrounding Properties:	PDD No. 24 (Vulcan Limestone Quarry) and residential lands to the east, residential to the south, natural resources, agricultural, and residential to the west, and commercial and natural resources to the north
Applicant's Action Requested:	For review and consideration.

INTRODUCTION:

As required by the Professional Services Agreement between the City of Franklin and Stantec Consulting Services Inc. for Quarry Monitoring Services, Stantec had undertaken a month long monitoring of air quality adjacent to the Payne & Dolan quarry. The results of that effort are set forth in the attached report.

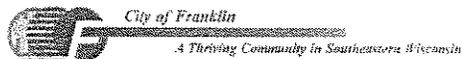
This report had been provided to the Quarry Monitoring Committee at its April 24, 2014 meeting. The Committee subsequently approved a motion that "the Air Monitoring Report by Stantec Consulting Services ... be forwarded to the Plan Commission and Common Council for their review and consideration."

The Quarry Monitoring Committee also indicated at that time that it would consider this report and its findings during its review of renewal of the quarry monitoring contract between the City and Stantec. This information was subsequently considered by the Committee at its August 14th meeting, and is reflected in its motion as set forth in the separate Plan Commission staff report entitled "Professional Services Agreement between the City of Franklin and Stantec Consulting Services, Inc. for Quarry Monitoring Services".

AIR MONITORING REPORT October-November, 2013

**Franklin Aggregates
Franklin, Wisconsin**

Prepared for:



City of Franklin
9229 West Loomis Road
Franklin, WI 53132

Prepared by:



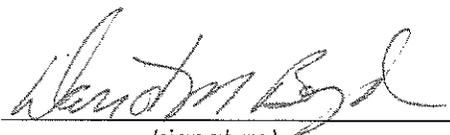
Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon, WI 53092

Project No. 193702572

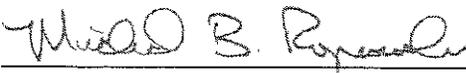
March 17, 2014



This document entitled **AIR MONITORING REPORT October-November, 2013 Franklin Aggregates, Franklin, Wisconsin** was prepared by Stantec Consulting Services Inc. for the City of Franklin, Wisconsin. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Prepared by 
(signature)

David M. Boyd, PE, Senior Engineer

Reviewed by 
(signature)

Michael B. Roznowski, CHMM, Project Manager

Reviewed by 
(signature)

David A. Rautmann, PE, Principal



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FIGURE 1 - SITE LOCATION AND LOCAL TOPOGRAPHY

FIGURE 2 - AIR MONITORING SAMPLER LOCATIONS

1.0 Introduction

Stantec Consulting Services Inc. (Stantec) was retained by the City of Franklin in August 2013 to provide the following monitoring activities at the Vulcan Materials Company and Payne & Dolan, Inc. (d/b/a: Franklin Aggregates) limestone quarries located in Franklin, Wisconsin:

- Blast Monitoring, Data Collection, and Evaluation
- Air Quality Monitoring, Data Collection, and Evaluation
- Quarry Operations Monitoring and Reporting by Direct Observation

Figure 1 shows the location of these quarries and the adjacent area. The objective of the monitoring was to evaluate if any of short-duration particulate incidents were occurring around the perimeter of the quarry, and combine this real-time data with visual observations to help identify any root causes of these incidents. The end goal is to identify specific issues, regardless of whether the national air standards are being exceeded (as outlined in the existing Planned Development District [PDD] Ordinances), and to work with Franklin Aggregates to find mutually-agreeable solutions.

This report provides a summary and discussion of particulate air quality monitoring that was completed adjacent Franklin Aggregates during the period October 8 through November 14, 2013.

2.0 Equipment, Locations, and Monitoring Periods

2.1 EQUIPMENT

The equipment chosen for the ambient monitoring consisted of the following:

- TSI DustTrak 8530 Aerosol Monitor
- Lufft WS600 Ultrasonic Weather Station
- C.A.M.P. Site Telemetry System
- Netronix Thiamis Intelligent Control Unit (ICU) 820

The TSI DustTrak 8530 Aerosol Monitor is a battery-operated monitor that provides real-time aerosol contaminant (dust, smoke, fumes, and mists) mass concentration readings. It is commonly used for ambient monitoring due to its capabilities in harsh industrial workplaces, construction and outdoor environmental sites. The monitor is capable of measuring aerosol concentration ranging from 0.001 to 400 milligrams per cubic meter (mg/m³). For this project, the monitor was set to measure aerosol concentrations corresponding to Particulate Matter less than 10 microns (PM₁₀).

The Lufft WS600 Ultrasonic Weather Station allows real-time measurement of the following parameters: air pressure; dew point; precipitation; relative humidity; temperature; wind direction and wind speed. It is also commonly used for ambient outdoor monitoring, and provides important meteorological data that can be integrated with the corresponding dust monitoring data.

The C.A.M.P. Site Telemetry System and Netronix Thiamis ICU820 allowed access of both aerosol monitor and weather station data real-time on computers via an internet connection. It also allowed certain preventative maintenance measures and troubleshooting without having to visit the sites.

2.2 LOCATIONS

Monitor site selection was based on a variety of factors, including but not limited to: whether they were city-owned; proximity to quarry boundaries; how secure each site was to deter vandalism; site elevation; surrounding topography; surrounding vegetation. Based on communication and agreement from the City, equipment was temporarily located at the following three locations:

- City of Franklin Pumping Station on 51st Street
- City of Franklin Water Pump House on Drexel Avenue
- Private Residence at 6725 Root River Drive

Having three locations allowed an evaluation of the influence of weather conditions on the monitoring by ensuring at least one or two stations were "downwind" and conversely "upwind"

at all times. The monitoring locations are shown on Figure 2, and further described in the following sections.

2.2.1 City of Franklin Pumping Station on 51st Street

The pumping station is located on the west side of 51st Street, across from and south of the outlet of adjacent West Minnesota Avenue. A full set of the previously described equipment was placed at this location, except for the weather station. To help deter vandalism the equipment was placed on the flat roof of this structure, and accessed via a ladder. Electrical power was supplied directly from an outlet on the exterior of the pumping station.

2.2.2 City of Franklin Water Pump House on Drexel Avenue

The pump house is located on the southwest corner of Drexel Avenue and South 58th street. A full set of the previously described equipment was placed at this location, including the weather station. To both help deter vandalism and also obtain better meteorological data, the equipment was placed on the flat top of the chimney structure, and accessed via a ladder. Electrical power was supplied directly from an outlet on the interior of the garage.

2.2.3 Private Residence at 6725 Root River Drive

This private residence is owned by Janice Pripchepp. Both the City Planning Manager and Stantec Project Manager communicated with Ms. Pripchepp prior to equipment placement. A full set of the previously described equipment was placed at this location, except for the weather station. The equipment was placed on a small tripod out and away from the residence and adjacent driveway and roads, and surrounded with construction fence to help deter vandalism. Electrical power was supplied directly from an exterior outlet in the rear (western) yard of the residence.

2.3 MONITORING PERIOD

Equipment was initially placed at the locations described in the previous section on October 7, 2013, and removed from the properties on November 15, 2013, for a total of 38 days. The agreed-upon scope of work required a minimum monitoring period of one month, meaning four weeks, corresponding to 28 days. Stantec decided to extend the monitoring period since two of the DustTrak monitors had periods of time where they were off-line either due to equipment errors/malfunctions, telemetry problems, or since the local internet carrier was interrupted. The following summarizes the amount of time each monitor was on-line and collecting data:

- DustTrak Serial No. T00468035
Drexel Avenue
Days operating: 29.5
- WS600 Weather Station
Drexel Avenue
Days operating: 37.7

- DustTrak Serial No. TA01067132
 51st Street
 Days operating: 34.1
- DustTrak Serial No. T00981936
 Private Residence
 Days operating: 38.0

The data analysis concentrated on the period of October 8 to November 14, 2013, when data capture averaged more than 99.4 percent, with the exception of the following periods:

<u>Location</u>	<u>Monitor Outage – Beginning and Ending Date-Time</u>			
51st Street	10/08/13	12:00 AM	to	10/08/13 8:00 AM
	11/08/13	9:00 AM	to	11/09/13 7:00 AM
	11/10/13	2:00 AM	to	11/13/13 12:00 PM
Drexel Avenue	10/08/13	4:00 PM	to	10/08/13 4:00 PM
	10/17/12	10:00 AM	to	10/25/12 7:00 AM
	10/25/13	10:00 AM	to	10/26/13 10:00 AM

2.4 METHODS

Prior to deployment, all equipment was prepared and calibrated by Pine Environmental Services LLC (Pine), the vendor from which the equipment was rented. A representative of Pine met with Stantec personnel to demonstrate how to properly deploy, use and field-calibrate all equipment. Equipment was initially placed at all locations on October 7, 2013 by Stantec personnel. Upon placement, all DustTrak monitors were field calibrated by Stantec personnel.

Equipment was periodically monitored by Stantec personnel following a log-in procedure via a web portal. In addition, self-imposed alert conditions were set up which provided real-time e-mail notices to both Stantec and Pine personnel in the event of any equipment errors or problems.

Site assessments were completed weekly by Stantec personnel, during which time the equipment was visually inspected and recalibrated to ensure proper operation. Also at this time Stantec personnel made off-site observations of both weather conditions and quarry operations.

As indicated in Section 2.3 there were several instances in which the DustTrak monitors were off-line either due to equipment errors/malfunctions, telemetry, or since the local internet carrier was interrupted. When malfunctions did occur and could not be resolved by Stantec personnel, representatives of Pine mobilized to the site to repair or replace the units.

3.0 Results

3.1 PROJECT GOALS

The initial objective of the air monitoring as outlined in the original Request for Proposal (RFP) was to determine and verify that Franklin Aggregates was operating in compliance with the PDD Ordinance. The PDD sets a standard for impact of particles of 10 microns or smaller (PM₁₀) to ambient or off-site air quality. The standard outlined in the PDD is the currently accepted health standard for particulates, which is referred to as the National Ambient Air Quality Standard (NAAQS). The U.S. Environmental Protection Agency's (USEPA) health-based NAAQS for PM₁₀ is 50 µg/m³ (measured as an annual mean) and 150 µg/m³ (measured as a daily concentration) (USEPA, 2014).

The data collected in this study was analyzed relative to a USEPA scale referred to as the Air Quality Index (AQI). The AQI is a yardstick that runs from 0 to 500; the higher the AQI value, the greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 represents good air quality with little potential to affect public health, while an AQI value over 300 represents more hazardous air quality. An AQI value of 100 generally corresponds to the national air quality standard for the pollutant, which is the level EPA has set to protect public health. AQI values below 100 are generally thought of as satisfactory. When AQI values are above 100, air quality is considered to be unhealthy; at first for certain sensitive groups of people, then for everyone as AQI values get higher (USEPA, AQI, 2014).

Relative to this project, the applicable AQI values (those from 0 to 150) and their descriptions are summarized below. There are higher AQI categories, but since the highest 24-hr PM₁₀ concentration obtained during this study was 189 µg/m³ they are not applicable.

Air Quality Index	PM ₁₀ Concentration	USEPA Descriptor	Level of Health Concern
0 - 50	0 to 54 µg/m ³	Good	Air quality is considered satisfactory, and air pollution poses little or no risk.
51 - 100	55 to 154 µg/m ³	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people.
101 - 150	155 to 254 µg/m ³	Unhealthy for Sensitive Groups	Although general public is not likely to be affected at this AQI range, persons with heart and lung disease, older adults and children are at greater risk from the presence of particles in the air.

The original city RFP requested the use of a single PM₁₀ air sampler that used pre-weighed filters and provides a 24-hour composite result. When operated and placed in a location in accordance with USEPA requirements, this type of equipment set-up can provide proof that the established NAAQS is or is not being met.

A similar station was operated by WDNR for years in Franklin. However the results of this data did not provide the detail needed to help city officials or residents identify any short-term air quality issues. Twenty four-hour averages were simply too long a period to capture or identify any short-duration air quality events that may have occurred during gusting winds or when a un-tarped truck traveled past a sampling location adjacent the perimeter of the quarry. Another issue is that this equipment only operated and collected a 24-hour sample once every six days. In addition, many times a single station will undoubtedly be in the wrong place at the wrong time to obtain a proper evaluation. Also, with a single station the ability to differentiate between quarries and non-quarry activities such as adjacent construction or other dust-causing activities was limited.

Based on this prior monitoring history, Stantec recommended, and the city agreed, to alternative equipment that is commonly used for detailing particulate exposures at industrial sites, and is intended to provide "real time" data. This enabled the evaluation of short-duration incidents, and combined real-time data with visual observations to help identify any root causes of local dust issues. Instead of a single data point being generated on each (24-hour) day of sampling, real-time samplers can collect multiple data points each minute of each day. Trends can be identified, such as time of day issues, or corresponding weather conditions that lead to city concerns. The end goal is to identify specific issues, regardless of whether the NAAQS for PM₁₀ is being exceeded, and to work with Franklin Aggregates to find mutually-agreeable solutions.

3.2 CITIZEN COMPLAINTS DURING REPORTING PERIOD

No documented citizen complaints pertaining to air quality were received by the city or the quarry via the published on-line quarry complaint procedure during the period that air monitoring was completed (Weninger, 2013) (Dietl, 2013).

3.3 WEATHER MONITORING

As previously outlined a weather station was installed on the top of the chimney structure at the pump house located on the southwest corner of Drexel Avenue and South 58th Street. The weather station allowed measurement of the following parameters: air pressure; dew point; precipitation; relative humidity; temperature; wind direction and wind speed.

For quality control a comparison of temperature (maximum and minimum) and wind speed (maximum) was completed between the installed weather instrument and a local meteorological weather station located at the intersection of 43rd and Rawson Avenue (Weather Underground). This comparison was performed on random days during the monitoring period, and indicated the following:



- **Temperature** – The instrument readings correlated well and appear consistent (i.e., the same) with the local weather station.
- **Wind Speed** – The maximum wind speed measured by the instrument appeared to average approximately one half of the speed measured at the local weather station. Thus, the instrument readings appear to correlate with the gust readings, but were not consistent (i.e., the same) with the local weather station.

The goal of installing a wind speed meter (anemometer) is to position it in a location where the wind flows freely and is not influenced by nearby objects. The World Meteorological Organization has set the international standard height for wind measurement devices at ten meters (33 feet) above ground, with no obstructions at or above this level (WMO, 2006). Attaining this height can not only be difficult but expensive as well. For a rooftop installation, the minimum height to avoid anomalous winds caused by the roof itself is 3 meters (10 feet) above the most exposed part. Accuracy of the wind speed indicator is not just a matter of height. Local obstructions like nearby mature trees, houses and buildings all have the potential of impacting anemometer readings. Unfortunately this is the reality of taking wind measurements.

Stantec understood how difficult it would be to obtain accurate wind information for this assessment. However, it was understood and compromised that accurate wind speeds were not absolutely necessary for this initial assessment. Instead, it was more important to have consistent measurements to simply identify times of the day when wind speeds and gusts were highest, and to correlate and compare these periods to airborne dust concentrations. Based on the comparison of the instrument readings versus the local weather station, it appears the data obtained meets this objective.

A secondary result of the monitoring was an understanding that the local meteorological weather station data correlates well with the conditions in immediate proximity to the quarries. Should future monitoring events occur, Stantec will rely on the Weather Underground data and will not operate the weather station.

3.4 AMBIENT AIR QUALITY MONITORING

The initial data evaluation for this study was to determine the 24-hour average PM_{10} ambient air concentration at each of the monitoring sites for each separate day during the investigation period (October 8 to November 14, 2013). Additional data analysis included evaluating the average temperature, wind speeds, wind direction and precipitation for each day. Also correlated to the data was the Payne & Dolan blasting and operation schedule for the quarries and operation of the generator engines at the Drexel and 51st Street monitoring sites.

For the thirty-eight day monitoring period, twenty-seven days recorded good air quality (see Section 3.1) at all three air monitoring stations. The data is summarized in Table 3.4-1 below.

Table 3.4-1 Air Monitoring Data Summary, Including 24-hour Average PM₁₀ Concentrations (Oct 8 to Nov 14, 2013)

Day	Date	24-hour Average PM ₁₀ Concentration			Meteorological Data				
		Private	Drexel	51st	Average Temperature	Wind Speed mph		Wind Direction	Precipitation Inches
					Deg F	High	Average		
Tuesday	10/8/2013	20	17	11	66	17	4	SSE	0.01
Wednesday	10/9/2013	31	30	44	61	15	3	SSE	0.00
Thursday	10/10/2013	102	112	149	57	14	2	E	0.00
Friday	10/11/2013	79	75	89	62	21	4	ESE	0.01
Saturday	10/12/2013	72	48	58	62	17	4	SSW	0.27
Sunday	10/13/2013	28	19	38	50	13	3	WNW	0.00
Monday	10/14/2013	27	28	56	49	17	4	E	0.00
Tuesday	10/15/2013	52	33	48	56	23	5	S	0.19
Wednesday	10/16/2013	13	8	18	51	18	6	WSW	0.01
Thursday	10/17/2013	33	22	32	47	15	3	WNW	0.10
Friday	10/18/2013	40	29	38	44	20	5	WSW	0.01
Saturday	10/19/2013	22	32	21	45	22	5	WSW	0.00
Sunday	10/20/2013	43	32	38	44	15	3	SSW	0.01
Monday	10/21/2013	18	32	17	42	22	7	W	0.00
Tuesday	10/22/2013	19	32	20	37	14	4	W	0.00
Wednesday	10/23/2013	14	32	15	37	22	6	WNW	0.00
Thursday	10/24/2013	14	32	16	38	18	5	WNW	0.00
Friday	10/25/2013	17	17	21	40	17	7	SW	0.00
Saturday	10/26/2013	9	10	11	48	17	9	W	0.00
Sunday	10/27/2013	19	27	25	43	11	4	SW	0.00
Monday	10/28/2013	8	14	14	41	16	8	NNE	0.00
Tuesday	10/29/2013	48	63	62	43	15	3	ENE	0.00
Wednesday	10/30/2013	114	151	159	50	24	3	SSE	0.02
Thursday	10/31/2013	89	56	48	58	23	5	WSW	0.69
Friday	11/1/2013	38	43	45	44	14	7	W	0.07
Saturday	11/2/2013	26	32	29	44	8	4	NNW	0.01
Sunday	11/3/2013	22	27	27	43	9	4	SE	0.00
Monday	11/4/2013	189	37	33	49	11	8	SSE	0.00
Tuesday	11/5/2013	61	70	70	53	21	6	SSE	0.02
Wednesday	11/6/2013	16	19	18	46	24	8	WSW	0.39
Thursday	11/7/2013	42	49	50	36	17	5	W	0.01
Friday	11/8/2013	71	85	143	42	18	6	S	0.00
Saturday	11/9/2013	17	16	62	48	32	12	WSW	0.00
Sunday	11/10/2013	25	29	42	43	24	8	W	0.00
Monday	11/11/2013	22	25	43	34	23	7	NW	0.13
Tuesday	11/12/2013	16	25	43	26	21	6	WNW	0.02
Wednesday	11/13/2013	20	20	28	31	32	12	SW	0.00
Thursday	11/14/2013	46	30	26	40	25	9	SW	0.00

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups); orange simply annotates weekends.

Based on the 24-average PM_{10} concentrations measured at each monitor location, only eleven days indicated moderate or worse air quality relative to the USEPA AQI scale on one or more of the air monitors. In order to access these days in more detail, Stantec evaluated the individual one-hour average PM_{10} concentrations that were measured on each of these days, along with the corresponding meteorological data. Each day or group of days is evaluated in the following sections.

Although previously outlined, it is important to re-emphasize that the USEPA health-based NAAQS for PM_{10} of $50 \mu\text{g}/\text{m}^3$ is measured as an annual mean, and the $150 \mu\text{g}/\text{m}^3$ is measured as a daily concentration (USEPA, 2014). The USEPA AQI ranges shown below are also based on a daily concentration (USEPA, AQI, 2014).

AQI 0 to 50

- Corresponds to a PM_{10} concentration between 0 to $54 \mu\text{g}/\text{m}^3$
- Highlighted via green-shaded cells on the air quality data tables within this report

AQI 51 to 100

- Corresponds to a PM_{10} concentration between 55 to $154 \mu\text{g}/\text{m}^3$
- Highlighted via orange-shaded cells on the air quality data tables within this report

AQI 101 to 150

- Corresponds to a PM_{10} concentration between 155 to $254 \mu\text{g}/\text{m}^3$
- Highlighted via pink-shaded cells on the air quality data tables within this report

Thus, even though we use these values as metrics in this evaluation, we are actually comparing the AQI using hourly PM_{10} concentrations, and not daily. In reality this is a much more stringent comparison, done so to help identify specific issues, regardless of whether the NAAQS for PM_{10} is being exceeded.

3.4.1 October 10 to 12, 2013

The air quality and meteorological data for Thursday, October 10, 2013 is summarized in Table 3.4-2 below.

Table 3.4-2 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 10, 2013

10/10/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
Thursday									
10/10/2013	12	AM	63	68	91	50	Calm	Calm	N/A
10/10/2013	1	AM	72	73	111	48	Calm	Calm	N/A
10/10/2013	2	AM	77	81	114	47	Calm	Calm	N/A
10/10/2013	3	AM	85	80	115	46	Calm	Calm	N/A
10/10/2013	4	AM	199	123	159	45	Calm	Calm	N/A
10/10/2013	5	AM	444	429	712	44	Calm	Calm	N/A
10/10/2013	6	AM	345	379	590	44	Calm	Calm	N/A
10/10/2013	7	AM	148	237	393	45	Calm	Calm	N/A
10/10/2013	8	AM	67	113	132	50	Calm	Calm	N/A
10/10/2013	9	AM	46	42	53	56	Calm	Calm	N/A
10/10/2013	10	AM	40	41	39	65	1	E	N/A
10/10/2013	11	AM	25	25	22	68	2	SSE	N/A
10/10/2013	12	PM	34	28	28	71	2	E	N/A
10/10/2013	1	PM	34	28	31	69	6	E	N/A
10/10/2013	2	PM	38	29	36	68	7	E	N/A
10/10/2013	3	PM	40	32	41	68	7	ESE	N/A
10/10/2013	4	PM	33	26	35	67	4	E	N/A
10/10/2013	5	PM	38	52	75	66	7	E	N/A
10/10/2013	6	PM	52	71	114	64	2	E	N/A
10/10/2013	7	PM	74	111	127	61	2	ESE	N/A
10/10/2013	8	PM	120	133	131	59	1	E	N/A
10/10/2013	9	PM	116	155	132	58	1	ENE	N/A
10/10/2013	10	PM	120	197	146	57	1	E	N/A
10/10/2013	11	PM	120	148	137	56	Calm	Calm	N/A
Daily (24-hour) Average			102	113	149				
Workday (6 am-5 pm) Average			79	83	123				
Off-Work (12-6 am, 5 pm-12 am) Average			122	132	166				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).
 Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

The air quality and meteorological data for Friday, October 11, 2013 is summarized in Table 3.4-3 below.

Table 3.4-3 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 11, 2013

10/11/2013						Meteorological Data			
Friday	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
			Private Residence	Drexel Avenue	51st Street				
10/11/2013	12	AM	127	134	154	54	Calm	Calm	N/A
10/11/2013	1	AM	144	128	155	54	Calm	Calm	N/A
10/11/2013	2	AM	161	135	176	53	Calm	Calm	0.01
10/11/2013	3	AM	140	137	178	52	Calm	Calm	0.01
10/11/2013	4	AM	130	114	165	52	Calm	Calm	N/A
10/11/2013	5	AM	130	128	172	51	Calm	Calm	N/A
10/11/2013	6	AM	139	208	277	50	Calm	Calm	N/A
10/11/2013	7	AM	205	157	113	52	2	ESE	N/A
10/11/2013	8	AM	90	57	62	56	6	ESE	N/A
10/11/2013	9	AM	48	48	53	62	1	ESE	N/A
10/11/2013	10	AM	54	57	59	67	2	SSE	N/A
10/11/2013	11	AM	50	48	52	72	1	SSE	N/A
10/11/2013	12	PM	44	45	45	73	4	S	N/A
10/11/2013	1	PM	42	39	40	73	10	ESE	N/A
10/11/2013	2	PM	41	37	39	72	7	ESE	N/A
10/11/2013	3	PM	36	34	34	73	8	ESE	N/A
10/11/2013	4	PM	34	30	36	70	9	E	N/A
10/11/2013	5	PM	32	32	39	68	7	SSE	N/A
10/11/2013	6	PM	40	44	35	65	4	NE	N/A
10/11/2013	7	PM	40	34	46	63	6	E	N/A
10/11/2013	8	PM	40	37	46	62	7	E	N/A
10/11/2013	9	PM	42	42	47	61	1	ESE	N/A
10/11/2013	10	PM	45	46	53	60	6	SE	N/A
10/11/2013	11	PM	45	38	51	60	1	SE	N/A

Daily (24-hour) Average	79	76	89
Workday (6 am-5 pm) Average	71	69	74
Off-Work (12-6 am, 5 pm-12 am) Average	85	31	101

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

The air quality data for Saturday, October 12, 2013 is summarized in Table 3.4-4 below.

Table 3.4-4 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 12, 2013

10/12/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
10/12/2013	12	AM	51	41	53	62	7	S	N/A
10/12/2013	1	AM	60	51	62	62	9	S	N/A
10/12/2013	2	AM	65	55	67	62	9	S	N/A
10/12/2013	3	AM	61	53	65	62	9	S	N/A
10/12/2013	4	AM	67	59	72	61	12	S	N/A
10/12/2013	5	AM	72	61	76	60	9	S	N/A
10/12/2013	6	AM	70	60	75	60	12	S	N/A
10/12/2013	7	AM	56	52	62	61	13	S	N/A
10/12/2013	8	AM	54	48	57	64	10	S	N/A
10/12/2013	9	AM	55	52	60	66	9	S	N/A
10/12/2013	10	AM	60	57	67	68	10	SSW	N/A
10/12/2013	11	AM	64	61	73	68	13	SW	N/A
10/12/2013	12	PM	94	89	111	68	13	SSW	N/A
10/12/2013	1	PM	113	103	126	65	9	SSW	0.17
10/12/2013	2	PM	112	94	110	64	10	SSW	0.05
10/12/2013	3	PM	113	84	100	65	11	SSW	N/A
10/12/2013	4	PM	26	17	19	67	10	WSW	N/A
10/12/2013	5	PM	32	10	10	67	10	W	N/A
10/12/2013	6	PM	152	17	16	64	7	W	N/A
10/12/2013	7	PM	151	16	21	61	7	W	N/A
10/12/2013	8	PM	125	18	22	59	6	W	N/A
10/12/2013	9	PM	18	17	20	57	4	W	N/A
10/12/2013	10	PM	21	25	25	58	6	W	N/A
10/12/2013	11	PM	29	20	32	53	Calm	Calm	N/A
Daily (24-hour) Average			72	48	58				
Workday (6 am-5 pm) Average			74	65	78				
Off-Work (12-6 am, 5 pm-12 am) Average			69	34	42				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

Stantec's observations of the data associated with the three-day period from October 10 to 12, 2013 were:

1. The highest concentrations during this period were between 1 and 9 AM on Thursday, between 7 PM on Thursday to 8 AM on Friday, and between noon and 4 PM on Saturday.
2. During each of these periods winds were either calm or very light. On Thursday and Friday, the ambient concentrations actually decreased during the periods of higher winds. We would expect that emissions from the quarry would generally be correlated with high winds associated with wind erosion of storage piles and pickup of dust off roadways; however this was not evident.
3. Elevated PM_{10} readings were consistently measured at all three monitors at the same time. One would expect that if the quarry was the source of PM_{10} being transported off-site, the downwind monitor would have the highest measured concentrations; however, this was not the case. Thus, the results do not indicate that the winds during this period were picking up particulate matter from the quarry and carrying it off the property.
4. During the full monitoring period, rock crushing at the base of the quarry was typically conducted between 6:30 AM to 4:30 PM Monday through Friday. Crushing was also conducted on two non-determined Saturdays during this period as well, between the hours of 7 AM and 2 PM (Weninger, 2014). Thus, a few of the times of elevated PM_{10} readings do correlate to times when crushing was being performed. However, there were also many hours showing elevated PM_{10} readings when crushing was not being performed, and also hours of non-elevated PM_{10} readings when crushing was being performed. Thus, no direct correlation can be made based on this data.
5. Thursday and Friday (the days with the highest PM_{10} readings obtained during this period) also corresponded to two days of elevated $PM_{2.5}$ readings throughout all of eastern Wisconsin per WDNR and USEPA (USEPA, AIRNOW, 2014). This indicates that elevated ambient concentrations were regional in nature and not necessarily associated with the specific quarry operations.
6. Visual observations were recorded by Stantec personnel on October 10. A small amount of airborne dust was noticed near the front entrance as trucks departing the site entered Rawson Avenue; it was generated by the truck wheels agitating dust from the roadway surface. In addition, dust was noticed in the quarry itself from traffic and operational equipment; however none of this dust appeared to be departing the property.

3.4.2 October 14, 2014

The air quality data for Monday, October 14, 2013 is summarized in Table 3.4-5 below.

Table 3.4-5 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 14, 2013

10/14/2013		Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
Monday				Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
10/12/2013	12	AM	51	39	73	42	Calm	Calm	N/A	
10/12/2013	1	AM	53	46	97	43	Calm	Calm	N/A	
10/12/2013	2	AM	48	49	104	42	5	NW	N/A	
10/12/2013	3	AM	47	53	95	44	4	WNW	N/A	
10/12/2013	4	AM	52	49	107	42	Calm	Calm	N/A	
10/12/2013	5	AM	55	53	118	43	4	NW	N/A	
10/12/2013	6	AM	48	104	121	45	5	WNW	N/A	
10/12/2013	7	AM	41	111	99	47	Calm	Calm	N/A	
10/12/2013	8	AM	40	33	34	51	5	NE	N/A	
10/12/2013	9	AM	13	4	6	57	13	E	N/A	
10/12/2013	10	AM	12	4	5	58	10	E	N/A	
10/12/2013	11	AM	17	7	8	57	10	E	N/A	
10/12/2013	12	PM	12	7	6	57	14	ESE	N/A	
10/12/2013	1	PM	9	6	6	58	13	E	N/A	
10/12/2013	2	PM	9	7	6	57	12	E	N/A	
10/12/2013	3	PM	9	6	6	57	13	E	N/A	
10/12/2013	4	PM	8	8	20	56	12	E	N/A	
10/12/2013	5	PM	14	10	52	53	8	E	N/A	
10/12/2013	6	PM	21	24	99	51	6	ESE	N/A	
10/12/2013	7	PM	23	17	114	50	6	ESE	N/A	
10/12/2013	8	PM	20	12	54	53	9	E	N/A	
10/12/2013	9	PM	16	9	46	53	10	E	N/A	
10/12/2013	10	PM	16	8	19	54	10	ESE	N/A	
10/12/2013	11	PM	17	8	20	54	9	SE	N/A	
Daily (24-hour) Average			27	28	57					
Workday (6 am-5 pm) Average			20	27	29					
Off-Work (12-6 am, 5 pm-12 am) Average			33	29	80					

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

Stantec's observations of the data associated with the one-day period on October 14 were:

1. The highest concentrations during this period were between 2 and 8 AM and between 6 and 9 PM.
2. During each of these periods winds were calm to moderate. The highest winds occurred between 9 AM and 5 PM. During this period the ambient concentrations actually decreased. We would expect that emissions from the quarry would generally be correlated with high winds associated with wind erosion of storage piles and pickup of dust off roadways; however this was not evident.
3. The wind changed direction throughout the day. The downwind monitor(s) did not consistently have the greatest PM₁₀ concentration. One would expect that if the quarry was the source of PM₁₀ being transported off-site, the downwind monitor would have the highest measured concentrations; however, this was not the case. Thus, the results do not indicate that the winds during this period were picking up particulate matter from the quarry and carrying it off the property.
4. During the full monitoring period, rock crushing at the base of the quarry was typically conducted between 6:30 AM to 4:30 PM Monday through Friday (Weninger, 2014). Thus, a few of the times of elevated PM₁₀ readings do correlate to times when crushing was being performed. However, there were also many hours showing elevated PM₁₀ readings when crushing was not being performed, and also hours of non-elevated PM₁₀ readings when crushing was being performed. Thus, no direct correlation can be made based on this data.
5. Visual observations were not recorded by Stantec personnel during this period.

3.4.3 October 29 to 31, 2013

The air quality data for Tuesday, October 29, 2013 is summarized in Table 3.4-6 below.

Table 3.4-6 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 29, 2013

10/29/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
Tuesday									
10/30/2013	12	AM	9	16	19	37	4	NNW	N/A
10/30/2013	1	AM	8	13	16	39	7	N	N/A
10/30/2013	2	AM	8	13	16	41	6	N	N/A
10/30/2013	3	AM	9	15	17	39	2	NW	N/A
10/30/2013	4	AM	11	17	21	41	Calm	Calm	N/A
10/30/2013	5	AM	13	19	26	39	Calm	Calm	N/A
10/30/2013	6	AM	20	35	33	41	Calm	Calm	N/A
10/30/2013	7	AM	42	42	47	44	9	ESE	N/A
10/30/2013	8	AM	42	44	44	45	9	ESE	N/A
10/30/2013	9	AM	37	49	46	46	12	ESE	N/A
10/30/2013	10	AM	42	48	45	47	9	SE	N/A
10/30/2013	11	AM	41	54	50	48	9	SE	N/A
10/30/2013	12	PM	42	54	45	49	10	SSE	N/A
10/30/2013	1	PM	38	46	49	49	8	SSE	N/A
10/30/2013	2	PM	38	46	52	49	10	ESE	N/A
10/30/2013	3	PM	48	57	70	49	10	ESE	N/A
10/30/2013	4	PM	48	64	65	47	6	E	N/A
10/30/2013	5	PM	68	86	83	45	6	NE	N/A
10/30/2013	6	PM	97	106	100	45	6	ENE	N/A
10/30/2013	7	PM	95	112	114	45	5	ENE	N/A
10/30/2013	8	PM	104	133	120	45	5	SE	N/A
10/30/2013	9	PM	109	161	130	45	Calm	Calm	N/A
10/30/2013	10	PM	84	150	155	43	Calm	Calm	N/A
10/30/2013	11	PM	99	141	124	41	Calm	Calm	N/A
Daily (24-hour) Average			48	63	62				
Workday (6 am-5 pm) Average			40	49	50				
Off-Work (12-6 am, 5 pm-12 am) Average			55	76	72				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

The air quality and meteorological data for Wednesday, October 30, 2013 is summarized in Table 3.4-7 below.

Table 3.4-7 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 30, 2013

10/30/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
10/30/2013	12	AM	88	124	133	42	Calm	Calm	N/A
10/30/2013	1	AM	91	146	169	42	Calm	Calm	N/A
10/30/2013	2	AM	99	176	183	42	2	SSE	N/A
10/30/2013	3	AM	109	166	205	43	2	SSW	N/A
10/30/2013	4	AM	108	162	199	43	Calm	Calm	N/A
10/30/2013	5	AM	131	194	203	43	Calm	Calm	N/A
10/30/2013	6	AM	163	202	323	43	Calm	Calm	N/A
10/30/2013	7	AM	154	229	279	41	1	SSW	N/A
10/30/2013	8	AM	166	203	185	43	1	NNE	N/A
10/30/2013	9	AM	146	172	162	47	1	ENE	N/A
10/30/2013	10	AM	144	182	176	50	2	E	N/A
10/30/2013	11	AM	142	176	170	52	4	SE	N/A
10/30/2013	12	PM	118	146	136	53	4	ESE	N/A
10/30/2013	1	PM	115	146	142	54	7	SE	N/A
10/30/2013	2	PM	120	160	153	54	4	ESE	N/A
10/30/2013	3	PM	147	192	184	55	7	SE	N/A
10/30/2013	4	PM	153	180	180	54	6	E	N/A
10/30/2013	5	PM	126	170	165	54	11	SE	N/A
10/30/2013	6	PM	109	150	144	54	2	SSE	N/A
10/30/2013	7	PM	35	50	48	55	6	SSE	N/A
10/30/2013	8	PM	16	18	20	57	7	SSW	N/A
10/30/2013	9	PM	44	59	53	59	2	SW	0.02
10/30/2013	10	PM	77	107	100	58	4	S	N/A
10/30/2013	11	PM	136	117	102	58	4	S	N/A
Daily (24-hour) Average			114	151	159				
Workday (6 am-5 pm) Average			143	181	190				
Off-Work (12-6 am, 5 pm-12 am) Average			90	126	133				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).
 Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

The air quality and meteorological data for Thursday, October 31, 2013 is summarized in Table 3.4-8 below.

Table 3.4-8 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for October 31, 2013

10/31/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
10/31/2013	12	AM	240	157	112	59	4	S	N/A
10/31/2013	1	AM	318	194	133	58	4	SSW	N/A
10/31/2013	2	AM	216	169	115	58	2	SW	N/A
10/31/2013	3	AM	143	92	84	58	1	SSW	N/A
10/31/2013	4	AM	184	67	70	59	4	SE	N/A
10/31/2013	5	AM	281	57	59	59	2	WSW	N/A
10/31/2013	6	AM	42	27	25	59	1	SSW	0.03
10/31/2013	7	AM	44	30	29	61	4	SSE	0.01
10/31/2013	8	AM	81	68	44	61	8	S	0.01
10/31/2013	9	AM	43	50	46	61	7	SSW	0.01
10/31/2013	10	AM	34	44	43	62	1	SSW	0.02
10/31/2013	11	AM	38	48	48	62	2	SSW	0.01
10/31/2013	12	PM	34	37	48	63	4	S	N/A
10/31/2013	1	PM	33	34	38	62	6	SSE	0.03
10/31/2013	2	PM	199	32	34	62	2	S	0.09
10/31/2013	3	PM	20	16	20	62	4	SW	0.21
10/31/2013	4	PM	13	11	10	61	Calm	Calm	0.1
10/31/2013	5	PM	17	13	13	60	4	N	0.15
10/31/2013	6	PM	4	9	8	57	2	WNW	0.09
10/31/2013	7	PM	11	15	14	57	15	NW	0.13
10/31/2013	8	PM	26	35	34	54	16	WNW	0.13
10/31/2013	9	PM	38	43	44	52	8	W	0.01
10/31/2013	10	PM	36	48	47	47	7	WSW	N/A
10/31/2013	11	PM	31	41	43	47	7	WSW	N/A
Daily (24-hour) Average			89	56	48				
Workday (6 am-5 pm) Average			53	36	35				
Off-Work (12-6 am, 5 pm-12 am) Average			119	72	60				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

Stantec's observations of the data associated with the three-day period from October 29 to 31, 2013 were:

1. The highest concentrations during this period were after 6 PM Tuesday through 7 PM Wednesday, and again from 10 PM Wednesday through 6 AM Thursday. In addition, one monitor experienced an elevated reading from 2 to 3 PM on Thursday.
2. During the full monitoring period, rock crushing at the base of the quarry was typically conducted between 6:30 AM to 4:30 PM Monday through Friday. Crushing was also conducted on two non-determined Saturdays during this period as well, between the hours of 7 AM and 2 PM (Weninger, 2014). The highest PM₁₀ concentrations on October 29 and 31 were measured when quarry activities were not occurring. PM₁₀ concentrations on October 30 were elevated before, during and following quarry operations. Thus, no direct correlation can be made based on this data.
3. Winds were light to moderate throughout the day on October 29. During the period of elevated PM₁₀ concentrations, the winds had actually decreased. We would expect that emissions from the quarry would generally be correlated with high winds associated with wind erosion of storage piles and pickup of dust off roadways; however this was not evident.
4. Winds were fairly light throughout the day on October 30, and ranged primarily from the south-southeasterly direction. With this wind direction, one would expect the downwind air monitor (private residence) to have the highest PM₁₀ concentration if the quarry was contributing to PM₁₀ off-site. This was not the case.
5. On October 31, the winds were prevailing from the southwest, which would suggest that the as the wind went across the quarry the 51st Street monitor would have the highest PM₁₀ concentration if the quarry was contributing to PM₁₀ off-site. This was not the case.
6. Elevated PM₁₀ readings were consistently measured at all three monitors at the same time. One would expect that if the quarry was the source of PM₁₀ being transported off-site, the downwind monitor would have the highest measured concentrations; however, this was not the case. Thus, the results do not indicate that the winds during this period were picking up particulate matter from the quarry and carrying it off the property.
6. Wednesday October 30 corresponded to a day of elevated PM_{2.5} readings throughout the entire state of Wisconsin per WDNR and USEPA (USEPA, AIRNOW, 2014). This indicates that elevated ambient concentrations were regional in nature and not necessarily associated with the specific quarry operations.
7. Visual observations were not recorded by Stantec personnel during this period.

3.4.4 November 4, 2013

The air quality and meteorological data for Monday, November 4, 2013 is summarized in Table 3.4-9 below.

Table 3.4-9 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for November 4, 2013

11/4/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
11/4/2013	12	AM	32	39	40	46	9	SE	N/A
11/4/2013	1	AM	26	31	31	45	10	SSE	N/A
11/4/2013	2	AM	21	26	26	45	9	SE	N/A
11/4/2013	3	AM	23	28	29	45	7	SSE	N/A
11/4/2013	4	AM	28	35	35	45	7	SSE	N/A
11/4/2013	5	AM	32	39	39	45	8	SSE	N/A
11/4/2013	6	AM	32	38	38	45	9	SSE	N/A
11/4/2013	7	AM	34	42	41	45	10	SE	N/A
11/4/2013	8	AM	29	35	32	46	10	SSE	N/A
11/4/2013	9	AM	99	30	27	48	11	SSE	N/A
11/4/2013	10	AM	38	30	26	50	10	SSE	N/A
11/4/2013	11	AM	2026	32	26	53	9	SSE	N/A
11/4/2013	12	PM	620	33	29	52	8	SE	N/A
11/4/2013	1	PM	134	33	30	52	8	SSE	N/A
11/4/2013	2	PM	48	31	28	52	8	SSE	N/A
11/4/2013	3	PM	75	33	27	54	8	SE	N/A
11/4/2013	4	PM	572	35	26	53	5	SSE	N/A
11/4/2013	5	PM	231	38	28	52	5	S	N/A
11/4/2013	6	PM	115	43	32	52	5	S	N/A
11/4/2013	7	PM	132	49	37	53	5	S	N/A
11/4/2013	8	PM	52	52	42	52	5	S	N/A
11/4/2013	9	PM	72	46	42	53	6	SSW	N/A
11/4/2013	10	PM	45	47	44	53	6	SW	N/A
11/4/2013	11	PM	40	47	45	52	3	SSW	N/A
Daily (24-hour) Average			190	37	33				
Workday (6 am-5 pm) Average			337	34	30				
Off-Work (12-6 am, 5 pm-12 am) Average			65	40	36				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).
 Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).



Stantec's observations associated with the data associated with November 4, 2013 were:

1. The highest PM₁₀ concentrations during this period were after 11 AM through 8 PM, all of which were measured at the monitor at the private residence.
2. Winds on this day were brisk and steady from the south-southeast. Upwind monitors (Drexel and 51st Street) indicated good air quality, but the downwind monitor by the private residence recorded particulate impacts. This data supports the theory that the quarry was contributing to elevated PM₁₀ concentrations off-site.
3. During the full monitoring period, rock crushing at the base of the quarry was typically conducted between 6:30 AM to 4:30 PM Monday through Friday (Weninger, 2014). Thus, a portion of the time of elevated PM₁₀ readings do correlate to times when crushing was being performed. However, there were also several hours near the end of the day showing elevated PM₁₀ readings when crushing was not being performed, and also hours of non-elevated PM₁₀ readings when crushing was being performed during period of higher wind speeds.
4. No documented visual inspections were made on this day both in the vicinity of the quarry of the quarry and the area around the downwind private residence and monitor.

3.4.5 November 8 and 9, 2013

The air quality and meteorological data for Friday, November 8, 2013 is summarized in Table 3.4-10 below.

Table 3.4-10 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for November 8, 2013

11/8/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration			Meteorological Data			
			Private Residence	Drexel Avenue	51st Street	Average Temperature Deg F	Wind Speed mph	Wind Direction	Precipitation Inches
11/8/2013	12	AM	71	93	96	33	5	NW	N/A
11/8/2013	1	AM	74	98	101	32	3	WNW	N/A
11/8/2013	2	AM	84	111	117	30	3	W	N/A
11/8/2013	3	AM	89	126	128	29	2	W	N/A
11/8/2013	4	AM	101	234	141	28	2	WSW	N/A
11/8/2013	5	AM	115	149	153	28	2	WSW	N/A
11/8/2013	6	AM	112	144	134	27	1	WSW	N/A
11/8/2013	7	AM	156	162	136	26	1	WSW	N/A
11/8/2013	8	AM	130	138	144	29	3	SW	N/A
11/8/2013	9	AM	76	80	152	33	2	WSW	N/A
11/8/2013	10	AM	47	54	152	40	4	SSW	N/A
11/8/2013	11	AM	47	52	152	43	7	S	N/A
11/8/2013	12	PM	48	52	152	44	4	SSE	N/A
11/8/2013	1	PM	49	58	152	45	6	SSW	N/A
11/8/2013	2	PM	57	62	152	45	9	SSE	N/A
11/8/2013	3	PM	53	63	152	45	4	SSW	N/A
11/8/2013	4	PM	80	81	152	45	4	SSE	N/A
11/8/2013	5	PM	73	26	152	42	4	ESE	N/A
11/8/2013	6	PM	78	64	152	42	9	SSE	N/A
11/8/2013	7	PM	66	42	152	43	6	SE	N/A
11/8/2013	8	PM	30	34	152	44	6	SSE	N/A
11/8/2013	9	PM	26	30	152	44	7	SSE	N/A
11/8/2013	10	PM	20	21	152	44	6	SE	N/A
11/8/2013	11	PM	16	18	152	45	7	S	N/A
Daily (24-hour) Average			71	85	143				
Workday (6 am-5 pm) Average			78	86	148				
Off-Work (12-6 am, 5 pm-12 am) Average			65	85	137				

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

The air quality data for Saturday, November 9, 2013 is summarized in Table 3.4-11 below.

Table 3.4-11 Monitored Air Quality Data, Including 1-hour Average PM₁₀ Concentrations for November 9, 2013

11/9/2013	Hour	AM/PM	1-hour Average PM ₁₀ Concentration		
			Private Residence	Drexel Avenue	51st Street
Saturday					
11/9/2013	12	AM	14	15	152
11/9/2013	1	AM	13	14	152
11/9/2013	2	AM	12	12	152
11/9/2013	3	AM	12	12	152
11/9/2013	4	AM	11	11	152
11/9/2013	5	AM	10	10	152
11/9/2013	6	AM	10	10	152
11/9/2013	7	AM	9	9	152
11/9/2013	8	AM	10	9	33
11/9/2013	9	AM	11	10	8
11/9/2013	10	AM	10	9	7
11/9/2013	11	AM	12	11	9
11/9/2013	12	PM	13	13	8
11/9/2013	1	PM	14	13	7
11/9/2013	2	PM	14	12	7
11/9/2013	3	PM	16	13	9
11/9/2013	4	PM	19	16	12
11/9/2013	5	PM	26	19	16
11/9/2013	6	PM	33	20	17
11/9/2013	7	PM	29	25	21
11/9/2013	8	PM	31	31	29
11/9/2013	9	PM	34	38	33
11/9/2013	10	PM	28	31	28
11/9/2013	11	PM	26	28	24

Daily (24-hour) Average	17	16	62
Workday (6 am to 5 pm) Average	13	12	37
Off-Work (12 am - 6 am, 5 pm - 12 am) Average	21	20	83

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

Stantec's observations of the data associated with the two days of November 8 to 9, 2013 were:

1. The highest concentrations during this period were prior to 9 AM on Friday, November 8th.

2. The monitoring results at the 51st Street location were not reliable after 9 AM on November 8 since the monitor or the telemetry equipment failed at that time. The monitor was not back on-line until 8 AM on November 9. As shown by the data the monitor output had a consistent concentration of 152 ug/m³ during this period.
3. During the morning of November 8, the winds were fairly light. In addition, the winds were predominantly in a southwesterly direction, which would theorize that the downwind monitor (51st Street) would have the highest PM₁₀ concentration. However, elevated PM₁₀ readings were consistently measured at all three monitors at the same time. One would expect that if the quarry was the source of PM₁₀ being transported off-site, the downwind monitor would have the highest measured concentrations; however, this was not the case. Thus, the results do not indicate that the winds during this period were picking up particulate matter from the quarry and carrying it off the property.
4. During the full monitoring period, rock crushing at the base of the quarry was typically conducted between 6:30 AM to 4:30 PM Monday through Friday. Crushing was also conducted on two non-determined Saturdays during this period as well, between the hours of 7 AM and 2 PM (Weninger, 2014). Thus, a few hours of elevated PM₁₀ readings do correlate to times when crushing was being performed. However, there were also many hours showing elevated PM₁₀ readings when crushing was not being performed, and also hours of non-elevated PM₁₀ readings when crushing was being performed. Thus, no direct correlation can be made based on this data.
5. Visual observations were recorded by Stantec personnel on November 8. No airborne dust was observed or documented departing the property.

3.5 BLASTING IMPACTS

Stantec obtained a list of days from Franklin Aggregates in which blasting had occurred during the monitoring period (Weninger, 2014). Three of these days correspond with periods of seismic monitoring completed by Giles Engineering Associates, Inc. as a subcontractor to Stantec (Giles, 2013). Table 3.5-1 correlates the monitored air quality to days that blasting occurred at the quarry.

Table 3.5-1 Monitored Air Quality Data for Quarry Blasting Days

Day	Date	24-hour Average PM ₁₀ Concentration			Off-site Seismic Monitoring Data from Giles	Actual Time(s) of Blasting Events
		Private	Drexel	51st		
Wednesday	10/9/2013	31	30	44	Yes	10:18 AM
Monday	10/14/2013	27	28	56	No	unknown
Thursday	10/17/2013	33	22	32	No	unknown
Monday	10/21/2013	18	32	17	No	unknown
Wednesday	10/23/2013	14	32	15	No	unknown
Friday	10/25/2013	17	17	21	No	unknown
Tuesday	10/29/2013	48	63	62	Yes	10:26 am / 10:33 am
Friday	11/1/2013	38	43	45	Yes	11:35 am / 11:39 am
Tuesday	11/5/2013	61	70	70	No	unknown
Thursday	11/7/2013	42	49	50	No	unknown
Wednesday	11/13/2013	20	20	28	No	unknown

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

The concentration on each of these days was consistently low with a few days on moderate values when compared to the AQI. One of these moderate days occurred on a day when blasting was conducted, while two occurred on days when blasting was not. Based on this, no direct correlation can be made to indicate that blasting is causing elevated PM₁₀ concentrations around the perimeter of the quarry.

3.6 PUMPHOUSE/LIFT STATION GENERATOR IMPACTS

Stantec obtained a list of days and times from the City in which the generators at the city-owned pumphouse and lift station had operated during the monitoring period (Dietl, 2014). Since the monitoring equipment was placed on the roof of each of these facilities, this was evaluated to determine the effect, if any, of the generator emissions on the data obtained. The following table summarizes this data.

Table 3.6-1 Monitored Air Quality Data, Including 24-hour Average PM₁₀ Concentrations, During Days of Generator Operation

Day	Date	24-hour Average PM ₁₀ Concentration			Pumphouse/Lift Station Generator Run Times (hours)	
		Private	Drexel	51st	Drexel	51st
Thursday	10/10/2013	102	112	149	0.50	0.53
Saturday	10/12/2013	72	48	58	1.00	
Thursday	10/17/2013	33	22	32	0.30	0.32
Friday	10/25/2013	17	17	21	0.50	0.38
Thursday	10/31/2013	29	56	48	0.40	0.29

Note 1: All concentrations are in micrograms of PM₁₀ per cubic meter of air (ug/m³).

Note 2: Concentration cells are shaded by the following colors: green = AQI 0-50 (good air quality); yellow = AQI 51-100 (moderate); pink = AQI 101-150 (unhealthy for sensitive groups).

As shown by the data, the generators operated on days when elevated PM₁₀ concentrations were measured, and also on days where elevated concentrations were not measured. Thus, no direct correlation can be made to indicate the generator operation affected the air monitoring equipment and PM₁₀ concentrations obtained during the study period.

4.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

During the period October 7 through November 15, 2013 Stantec completed ambient air quality monitoring from three fixed-location sites around the Franklin Aggregates property in Franklin, Wisconsin. The objective of the monitoring was to determine and verify that Franklin Aggregates is operating in compliance with the parameter regarding particulate air emissions as defined in existing PDD Ordinances, and also to determine if any specific issues could be identified based on the data obtained.

4.1 FINDINGS AND CONCLUSIONS

The following findings and conclusions are provided based on the monitoring and visual observations made during this air monitoring study:

- Generally, PM₁₀ concentrations at the three monitoring locations appeared consistent regardless of wind speed and direction. Thus, no conclusion could be made that the monitor downwind of the quarry consistently had the highest PM₁₀ concentrations.
- Generally, PM₁₀ concentrations at the three monitoring locations appeared consistent regardless of the time of day. Thus, no conclusion could be made that the highest PM₁₀ concentrations were consistently measured during periods of crushing/screening and other on-site quarry activities.
- Several of the days with the highest PM₁₀ readings obtained during the monitoring period also corresponded to days of elevated PM_{2.5} readings throughout all of eastern Wisconsin. This indicates that on those days elevated ambient concentrations were regional in nature and thus not likely associated with the quarry operations.
- In terms of measured PM₁₀ emissions, no evidence was obtained that the quarry operations are operating in non-compliance with the local PDD Ordinances.
- An elevated 24-hr airborne PM₁₀ concentration was measured on equipment at the private residence on November 4, 2013. The monitor was located downwind of the quarry, theorizing the source of the elevated concentration may have been the quarry. However, based on all available information, this theory cannot be confirmed.
- The only location where visible airborne dust/dirt emissions were observed during the study was adjacent the northeast front quarry exit on Rawson Avenue. The sources of the airborne particulates appeared to be from one or more of the following:
 - Wind blowing particulates from the exposed (un-tarped) product in dump-trucks departing the facility, and
 - Wind blowing particulates that had accumulated on the surface of Rawson Avenue and agitated by vehicular traffic.

On several occasions, Stantec observed a street sweeper operated by Franklin Aggregates operating both on Rawson Avenue and in the quarry entrance/exit areas along Rawson Avenue.

4.2 RECOMMENDATIONS

Based on the results of this study, we believe future air studies will likely produce similar results. However, the city could consider completing another evaluation during the hotter, drier months of the year (e.g., May through August) when airborne particulates are more likely to occur. If this is completed, we also recommend the following parameters different from this study:

- Change one or more of the monitor placement locations. In particular, the monitor placed by the private residence, which was the only off-site location available at the time of this study, is in a neighborhood with mature trees and other vegetation. This location appeared to work fine in late October – early November when most leaves had fallen prior to winter, but for studies completed during spring-summer-fall when more leaves are present, an alternative location should be chosen.
- The use of a portable meteorological weather station is likely unnecessary since local weather data appears to be both available and accurate.

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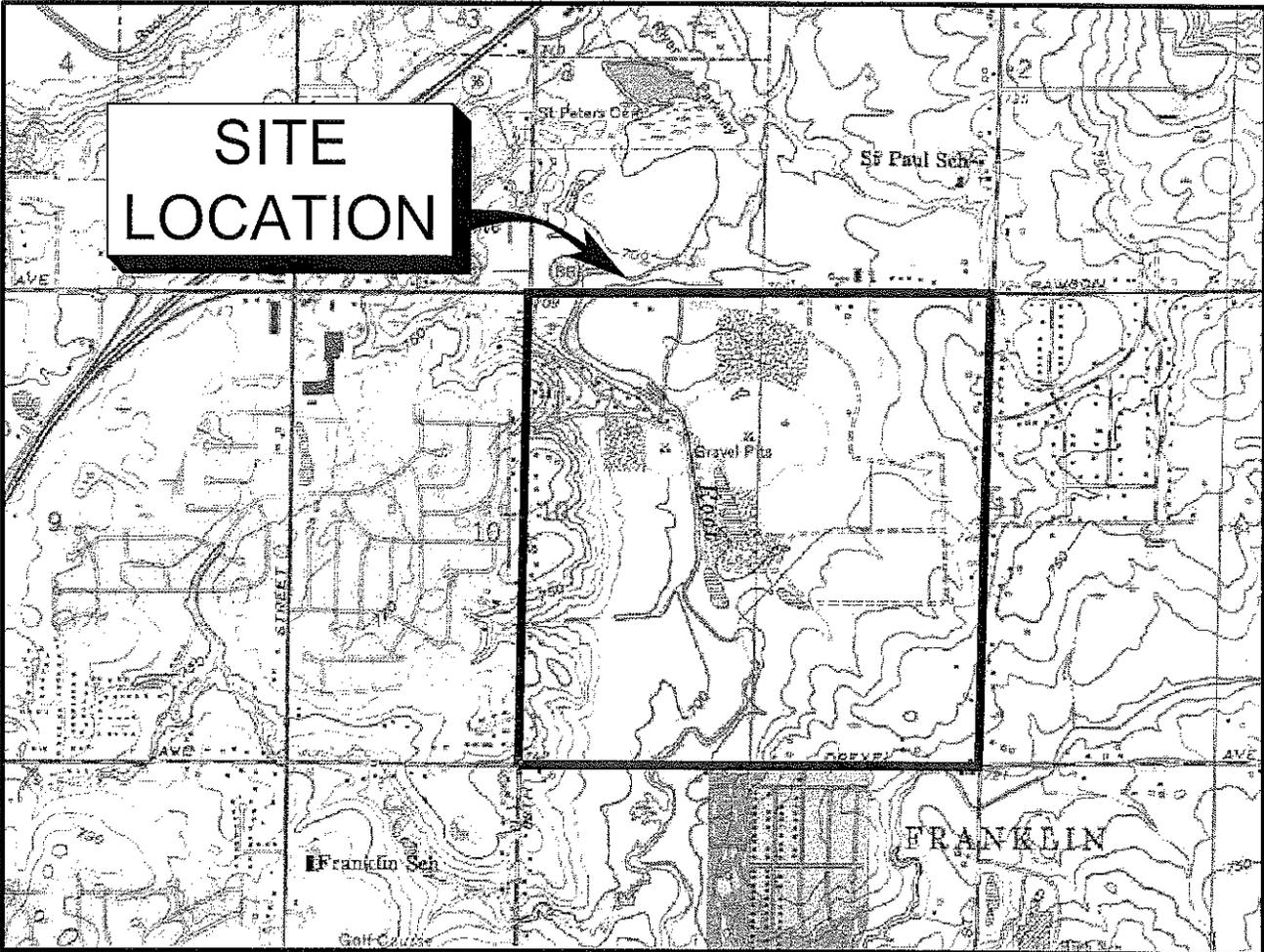
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FIGURE 1

Site Location and Local Topography



**SITE
LOCATION**

SCALE IN FEET

1" = 2000'



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

BASE MAP SOURCE: USGS 7.5 MINUTE QUADRANGLE, GREENDALE / WISCONSIN, 1976 (NATIONAL GEOGRAPHIC HOLDINGS, INC.)



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**SITE LOCATION
& LOCAL TOPOGRAPHY**

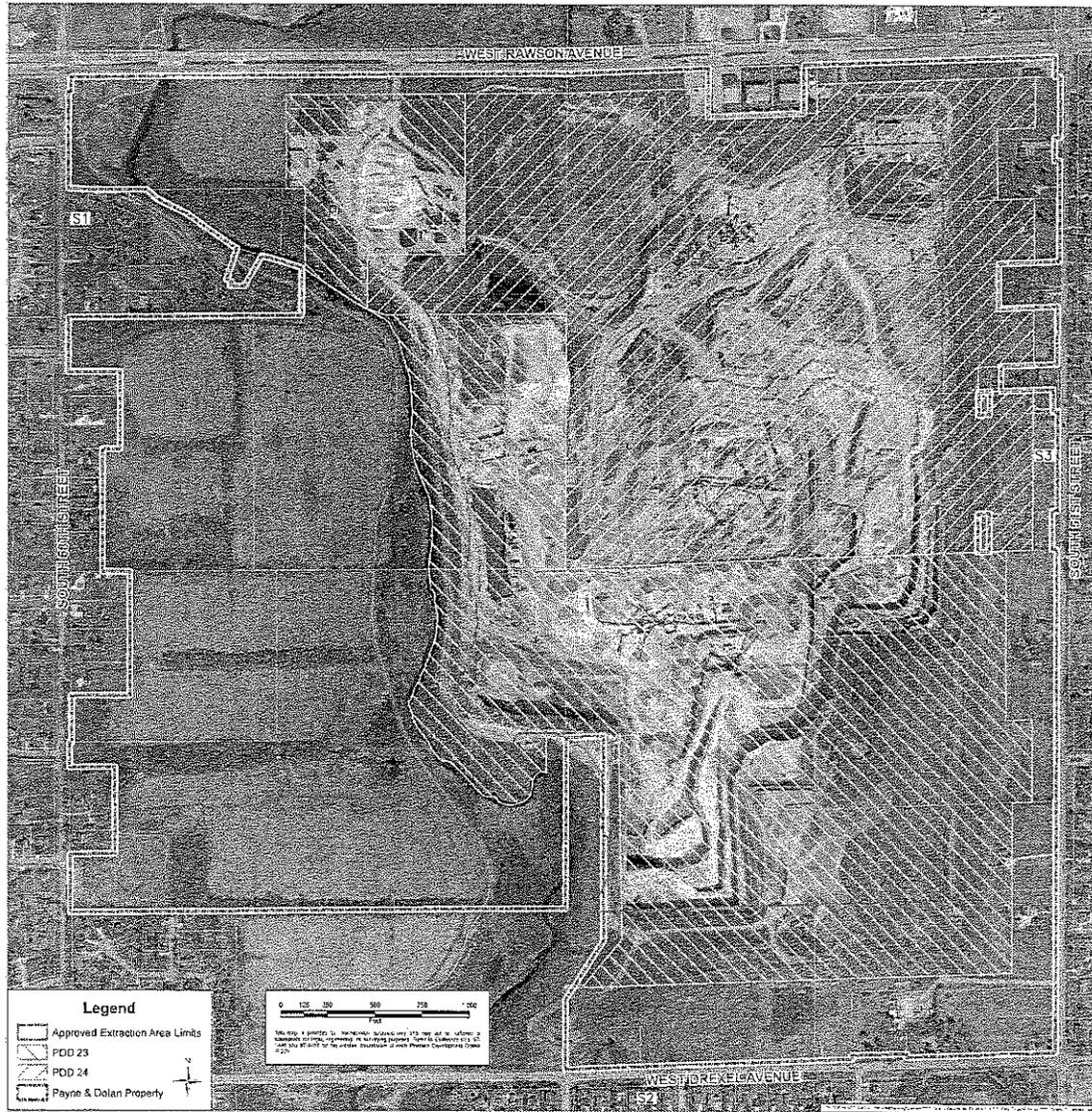
FRANKLIN AGGREGATES
FRANKLIN, WISCONSIN

DATE: 12/18/13	DRAWN BY: JRB	PROJECT MANAGER: MBR	PROJECT NUMBER: 193702572	FIGURE 1
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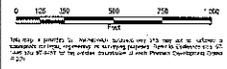
FIGURE 2

Air Monitoring Sampler Locations



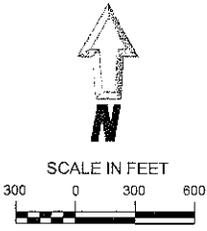
Legend

- Approved Extraction Area Limits
- PDD 23
- PDD 24
- Payne & Dolan Property



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- S# AIR SAMPLER LOCATION
- S1 PRIVATE RESIDENCE
- S2 CITY WATER PUMP HOUSE
- S3 CITY PUMPING STATION



		AIR MONITORING SAMPLER LOCATIONS (OCTOBER - NOVEMBER 2013)	
1165 Scheuring Road, De Pere, Wisconsin, 54115 Phone: 920-592-8400 Fax: 920-592-8444		FRANKLIN AGGREGATES FRANKLIN, WISCONSIN	
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DATE:	12/18/13	DRAWN BY:	JRB
TASK NUMBER:	210	PROJECT NUMBER:	193702572
			FIGURE 2

<p>APPROVAL</p> <p><i>Slw</i></p>	<p>REQUEST FOR COUNCIL ACTION</p>	<p>MEETING DATE</p> <p>September 9, 2014</p>
<p>REPORTS AND RECOMMENDATIONS</p>	<p>A Resolution Approving a Conveyance of Rights in Land, Conveying a Temporary Construction Easement and a Lump Sum Agreement for Payment for Lands or Interests in Lands from Public Utility, to and With the State of Wisconsin Department of Transportation, as they Pertain to City of Franklin Easements in the Area of the Reconstruction of South 27th Street (STH 241) Project from West College Avenue to West Drexel Avenue</p>	<p>ITEM NUMBER</p> <p><i>G.6.</i></p>

Attached is a draft of the above and the referenced documents. WIDOT needs to acquire land areas currently subject to City utility easements for the street reconstruction. The subject involves approximately 3.5 acres of City utility easement lands. Also attached is a plat maps depicting the subject land areas. The Acting City Engineer will be present at the meeting.

COUNCIL ACTION REQUESTED

A motion to adopt A Resolution Approving a Conveyance of Rights in Land, Conveying a Temporary Construction Easement and a Lump Sum Agreement for Payment for Lands or Interests in Lands from Public Utility, to and With the State of Wisconsin Department of Transportation, as they Pertain to City of Franklin Easements in the Area of the Reconstruction of South 27th Street (STH 241) Project from West College Avenue to West Drexel Avenue.

RESOLUTION NO. 2014-____

A RESOLUTION APPROVING A CONVEYANCE OF RIGHTS IN LAND, CONVEYING A TEMPORARY CONSTRUCTION EASEMENT AND A LUMP SUM AGREEMENT FOR PAYMENT FOR LANDS OR INTERESTS IN LANDS FROM PUBLIC UTILITY, TO AND WITH THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION, AS THEY PERTAIN TO CITY OF FRANKLIN EASEMENTS IN THE AREA OF THE RECONSTRUCTION OF SOUTH 27TH STREET (STH 241) PROJECT FROM WEST COLLEGE AVENUE TO WEST DREXEL AVENUE

WHEREAS, there are certain existing City of Franklin water utility and sanitary sewer and drainage easement areas in the South 27th Street right-of-way which the State of Wisconsin Department of Transportation needs to relocate for the street reconstruction project construction from West College Avenue to West Drexel Avenue; and

WHEREAS, the Wisconsin Statutes and the Wisconsin Administrative Code require the Department to obtain rights from municipal public utilities for such necessary land conveyances and costs, by way of, including, but not limited to the execution, delivery and receipt of a Conveyance of Rights in Land, a Temporary Construction Easement and a Lump Sum Agreement for Payment for Lands or Interests in Lands from Public Utility, for the South 27th Street reconstruction project; and

WHEREAS, the Engineering Department and consulting engineer, Kaempfer & Associates, Inc. having recommended approval of the aforesaid easement conveyance, grant and payment agreement for the some 3.5 acres of City utility easement area to be impacted by the project; and

WHEREAS, the Common Council having found such recommendations to be reasonable.

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and Common Council of the City of Franklin, Wisconsin, that the Conveyance of Rights in Land, the Temporary Construction Easement and the Lump Sum Agreement for Payment for Lands or Interests in Lands from Public Utility, to and with the State of Wisconsin Department of Transportation, as they pertain to City of Franklin utility easements in the area of the reconstruction of South 27th Street (STH 241) project from West College Avenue to West Drexel Avenue, in the form and content as annexed hereto, subject to minor changes as may be determined necessary by the Acting City Engineer and the City Attorney, be and the same are hereby approved.

BE IT FURTHER RESOLVED, that the Mayor, City Treasurer and City Clerk be and the same are hereby authorized to execute and deliver the aforesaid Conveyance of Rights in

RESOLUTION NO. 2014-_____

Page 2

Land, Temporary Construction Easement and Lump Sum Agreement, as may be required thereunder, respectively, together with any other documents/transactions which may be required to consummate the entirety of the matter(s).

Introduced at a regular meeting of the Common Council of the City of Franklin this _____ day of _____, 2014.

Passed and adopted at a regular meeting of the Common Council of the City of Franklin this _____ day of _____, 2014.

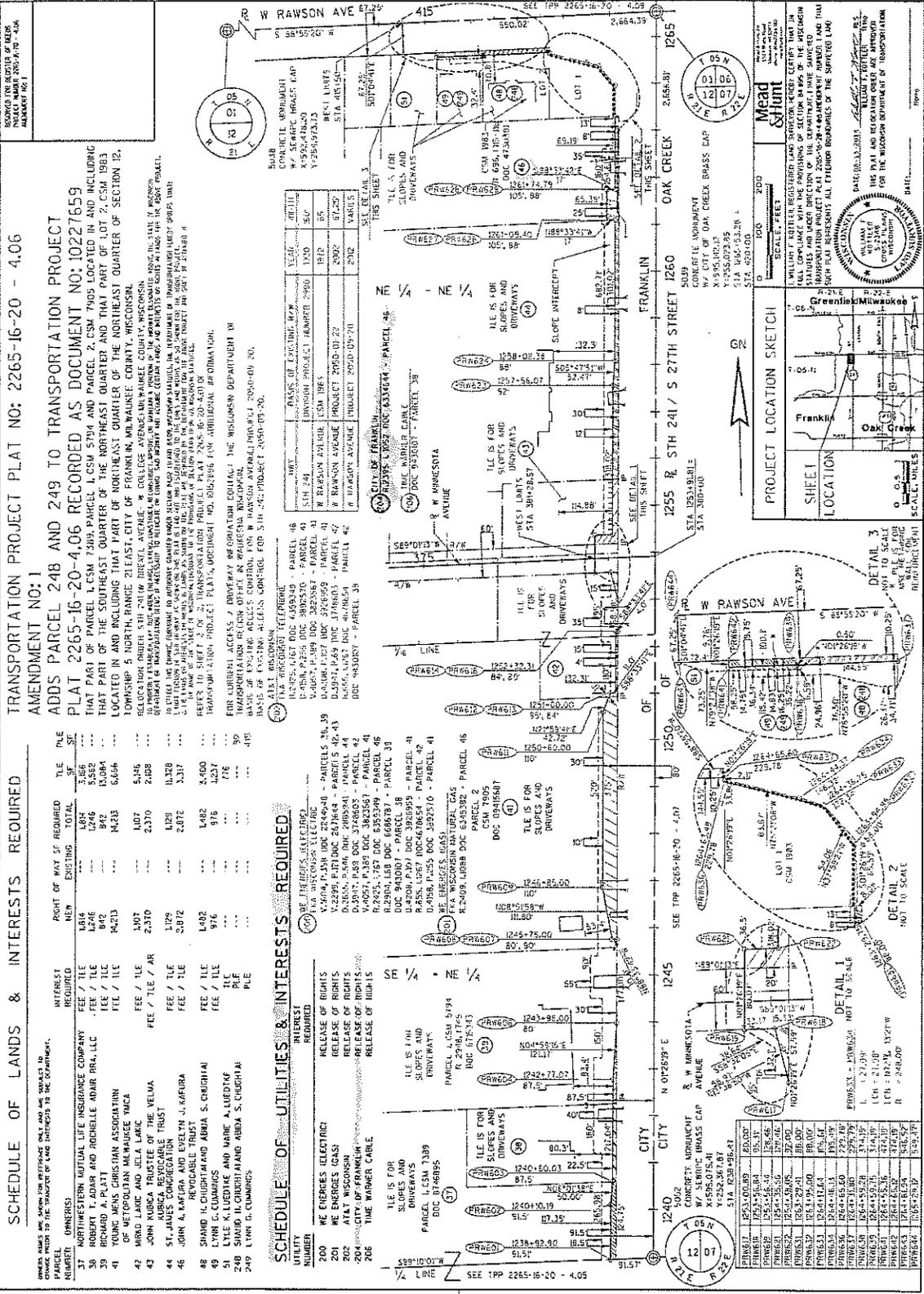
APPROVED:

ATTEST:

Stephen R. Olson, Mayor

Sandra L. Wesolowski, City Clerk

AYES _____ NOES _____ ABSENT _____



RECORDED FOR REFERENCE ONLY AND NOT SUBJECT TO THE TRANSFER OF LAND RIGHTS TO THE DEPARTMENT.
 OWNERS:
 161 HOME DEPOT USA INC
 162 DLK MANAGEMENT VA, LLC

INTERESTS REQUIRED:
 TILE
 PFE/TILE
 3.33%
 907 907 1868

PROXY OF ANY SE REQUIRED:
 NEA EXISTING 1014L 3F

DOC # 10237683
 RECORDED FOR REFERENCE ONLY AND NOT SUBJECT TO THE TRANSFER OF LAND RIGHTS TO THE DEPARTMENT.
 REC'D BY: DLK
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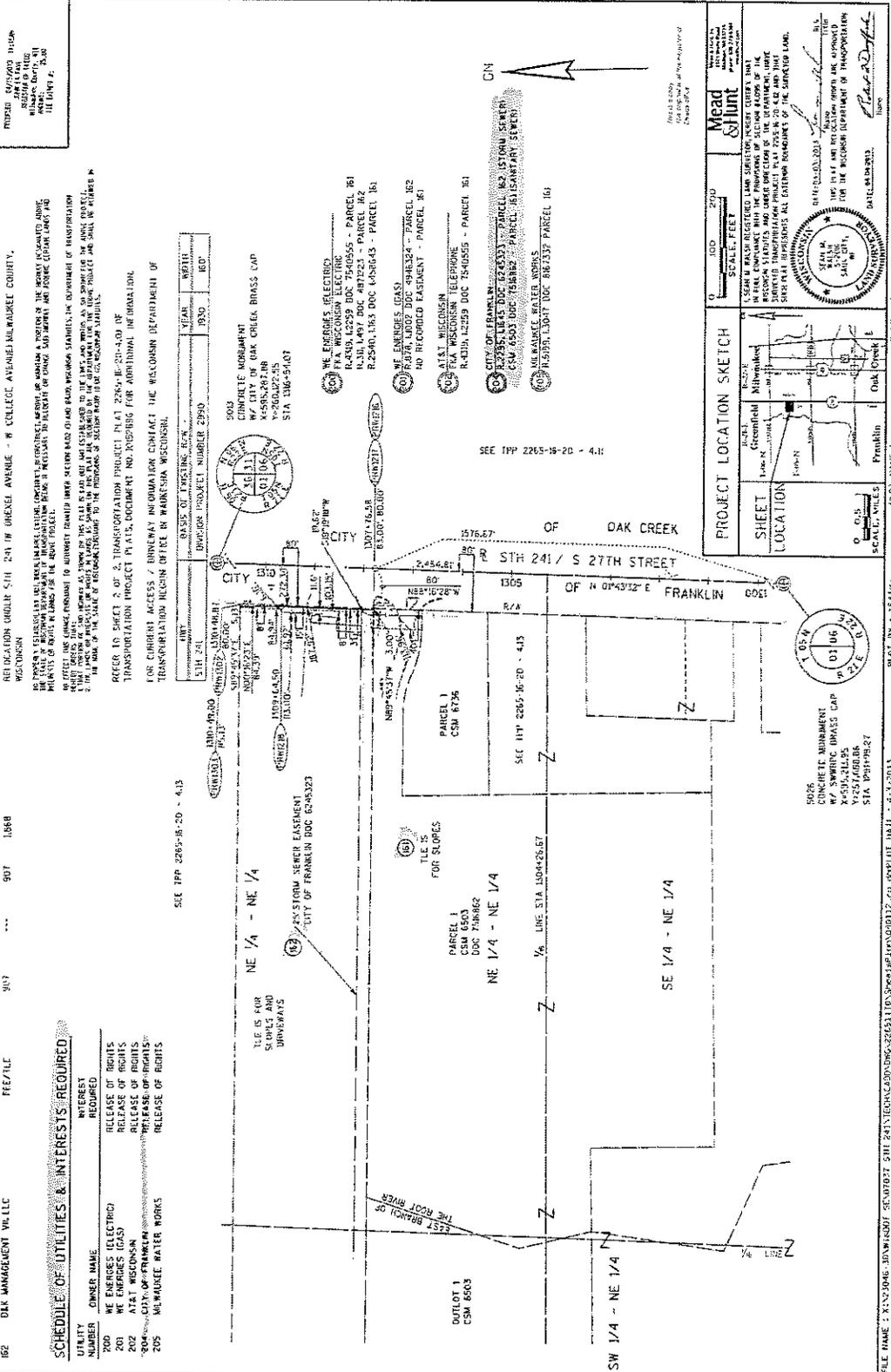
TRANSPORTATION PROJECT PLAT NO: 2265-16-20 - 4.12
 PART OF PARCEL 1, CSM 6503, LOCATED IN AND INCLUDING
 THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER,
 SECTION 3, TOWN 3 NORTH, RANGE 21 EAST,
 COUNTY OF FRANKLIN, MILWAUKEE COUNTY, WISCONSIN

RELOCATION OF STH 241 TO GREENE AVENUE - W COLLEGE AVENUE MILWAUKEE COUNTY, WISCONSIN

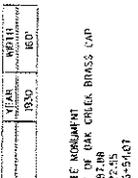
SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER NAME
 200 WE ENERGIES ELECTRIC
 201 WE ENERGIES (GAS)
 202 AT&T WISCONSIN
 203 CITY OF FRANKLIN
 204 CITY OF FRANKLIN
 205 MILWAUKEE WATER WORKS

INTERESTS REQUIRED:
 RELEASE OF RIGHTS
 RELEASE OF RIGHTS
 RELEASE OF RIGHTS
 RELEASE OF RIGHTS
 RELEASE OF RIGHTS



WE ENERGIES ELECTRIC
 WE ENERGIES (GAS)
 AT&T WISCONSIN
 MILWAUKEE WATER WORKS



PROJECT LOCATION SKETCH
 SCALE: FEET
 0 100 200

SHEET LOCATION
 GREENFIELD
 FRANKLIN
 OAK CREEK

SEE TYP 2265-16-20 - 4.11
 SEE TYP 2265-16-20 - 4.13
 SEE TYP 2265-16-20 - 4.14

PLAT NO: 2265-16-20 - 4.12
 PLAT BY: 35330cy
 DATE: 03/20/2013
 FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

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<p>APPROVAL <i>Steve Paul</i></p>	<p>REQUEST FOR COMMON COUNCIL ACTION</p>	<p>MEETING DATE Sept 9, 2014</p>
<p>REPORTS & RECOMMENDATIONS</p>	<p>Ordinance to Amend Ordinance 2013-2120, an Ordinance Adopting the 2014 Budgets for the General Fund, Development Fund, and the Capital Improvement Fund, for the City of Franklin for Fiscal Year 2014 to Approve Budget Amendments to the 2014 Budget</p>	<p>ITEM NUMBER <i>6.7.</i></p>

Background

The Common Council authorized certain actions that require a budget amendment.

1. On March 18, 2014 (G10) the unusual \$21,200 repair of a snow plow out of the contingency budget.
2. On March 18, 2014 the installation of a cross walk on 51st Street in front of the High School, with the School District sharing the cost of the walk. This item was not appropriated in the 2014 Capital Improvement Fund budget and
3. On March 31, 2014 the Common Council authorized the purchase of road salt to replace the extraordinary use in the winter of 2013-2014 out of the Contingency budget. The purchase order totaled \$102,700.

Analysis

While the snow plow repair and salt purchase have been charged to the Un-restricted Contingency budget, for expense classification purposes, the items should be charged to equipment maintenance and Road salt supplies. This will permit the understanding of what the purpose of the expenditure was from a historical standpoint. The proposed amendment, would reclassify the expenditures from Contingency and to the proper accounts as well as move the budget appropriation.

The unusually cold winter resulted in additional overtime in the Highway Dept to keep the city street safe. The overtime spent in the highway dept will cause the dept to exceed the overtime budget appropriation by upwards of \$25,000.

The Water fund used \$874,700 of funds to construct the Puetz Road water tower in 2002. That project was part of the Impact Fee study and included in the water impact fee collected on new development. Those Impact fees have now accumulated and are available for transfer to the Water Utility fund. These funds are needed to provide a resource for the Water & Waste Water building project currently under consideration.

Fiscal Note

The Water Impact fee balance at June 30, 2014 was \$1,053,000. Sufficient water impact fees are on hand to provide for the transfer.

Recommendation

Staff recommends the attached Budget Amendment transferring appropriations as indicated.

Motion to adopt Ordinance to Amend Ordinance 2013-2120, an Ordinance Adopting the 2014 Budgets for the General Fund, Development Fund, Capital Outlay Fund, and the Capital Improvement Fund, for the City of Franklin for Fiscal Year 2014 to Approve Budget Amendments to the 2014 Budget

STATE OF WISCONSIN : CITY OF FRANKLIN : MILWAUKEE COUNTY

ORDINANCE NO. 2014_____

AN ORDINANCE TO AMEND ORDINANCE 2013-2120, AN ORDINANCE ADOPTING THE 2014 ANNUAL BUDGETS FOR THE GENERAL FUND, THE DEVELOPMENT FUND, AND THE CAPITAL IMPROVEMENT FUND FOR THE CITY OF FRANKLIN FOR FISCAL YEAR 2014 TO APPROVE BUDGET AMENDMENTS TO THE 2014 BUDGET

WHEREAS, the Common Council of the City of Franklin adopted the 2014 Annual Budgets for the General Fund, and

WHEREAS, certain monies included in the 2014 Annual Budget of the General Fund were set aside for Contingency, and

WHEREAS, these amounts will be expended in 2014 for snow removal costs, and as a result, the related appropriations should be moved from contingency to the expenditure type now so intended; and

WHEREAS, additional \$25,000 of overtime, \$21,200 of snow plow repairs, and \$102,700 additional salt purchases are needed for public safety, and

WHEREAS, the Council desires to re-establish the unrestricted Contingency account by \$123,900, and

WHEREAS, the Development Fund holds \$873,727.29 of Water Impact fees collected for the Puetz Road Water Tower and the Water Utility advance funded this amount for construction of the tower, and

WHEREAS, the Common Council has determined a need for a cross walk on 51st Street near the high school, which cost will be shared by the School District, and

WHEREAS, the Common Council has determined that it would be in the best interest of the City to approve such appropriations in the 2014 budgets; and

WHEREAS, the Budget Appropriation Units will be adjusted for the items listed below.

NOW, THEREFORE, the Common Council of the City of Franklin does hereby ordain as follows:

Section 1 That certain appropriations in the 2014 Annual Budget for the respective funds of the City of Franklin be adjusted as follows:

General Fund	Highway	Non-Personnel Costs	Increase	123,900
	Contingency	Restricted Contingency	Decrease	123,900
	Highway	Personnel Costs	Increase	25,000
		Restricted Contingency	Decrease	25,000
Development Fund	Water Impact Fund Balance		Decrease	873,727.29
	Transfer to Other Funds		Increase	873,727.29
Capital Improvement DPW	Approved Projects		Increase	14,500
	DPW Charges for Services		Increase	7,250
	Contingency		Decrease	7,250

Section 2 Pursuant to §65.90(5)(a), Wis. Stats., the City Clerk is directed to publish a Class 1 notice of this budget amendment within ten days of adoption of this resolution.

Introduced at a regular meeting of the Common Council of the City of Franklin this 9th day of September, 2014.

Passed and adopted at a regular meeting of the Common Council of the City of Franklin this 9th day of September, 2014 .

APPROVED:

ATTEST:

Kristen Wilhelm, Acting Mayor

Sandra L. Wesolowski, City Clerk

AYES ___ NOES ___ ABSENT ___

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APPROVAL <i>Slw</i>	REQUEST FOR COUNCIL ACTION	MEETING DATE 09/09/2014
LICENSES AND PERMITS	MISCELLANEOUS LICENSES	ITEM NUMBER H.1.

See attached list from meeting of September 9, 2014.

COUNCIL ACTION REQUESTED



City of Franklin

9229 W. Loomis Road
Franklin, WI 53132-9728

414-425-7500

License Committee

Agenda*

Alderman's Room

September 9, 2014 – 5:50 pm

1.	Call to Order & Roll Call	Time:		
2.	Applicant Interviews & Decisions			
License Applications Reviewed		Recommendations		
Type/ Time	Applicant Information	Approve	Hold	Deny
Operator - New 2014-15 5:55 p.m.	Wolff, Melissa A 5833 S 110 th St Hales Corners, WI 53130 Romey's Place			
Operator - New 2014-15 6:00 p.m.	Becker, James P 6813 W. Wedgewood Dr Milwaukee, WI 53220 Walgreen – S 76 th St			
Operator - New 2014-15	Applin, Qyinn M 4521 W Ramsey Ave, #65 Greendale, WI 53129 Country Lanes			
Operator - New 2014-15	Le, Son Thanh 4927 W Woodland Dr Franklin, WI 53132 St Martin of Tours Church			
Operator - New 2014-15	Menzel, Kristen A 6938A S Howell Ave Oak Creek, WI 53154 Rawson Pub			
Operator - Renewal 2014-15	Nguyen, Doan X 3252 S 108 th St, #4 Milwaukee, WI 53227 St Martin of Tours Church			
Extraordinary Entertainment & Amusement	Krones Inc Person in Charge: Ronald Farber Event: 5K Wellness Fun Run/Walk Event Date: September 14, 2014			
3.	Adjournment	Time		

*Notice is given that a majority of the Common Council may attend this meeting to gather information about an agenda item over which they have 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.

APPROVAL <i>Slw Pal</i>	REQUEST FOR COUNCIL ACTION	MEETING DATE 9/9/14
Bills	Vouchers and Payroll Approval	ITEM NUMBER I. 1

Attached is a list of vouchers dated August 18, 2014 through September 4, 2014 Nos. 153408 through Nos. 153617 excluding # 153485 in the amount of \$ 1,209,304.37. Included in this listing is EFT's Nos. 2681 through Nos. 2694 and Library vouchers in the amount of \$ 18,346.13. Attached is a list of voided checks in the amount of \$(250.00).

The net payroll dated September 5, 2014 is \$335,476.74, previously estimated at \$336,000.00. Payroll deductions for September 5, 2014 are \$210,564.01, previously estimated at \$212,000.00.

Attached is a list of property tax settlements dated August 15, 2014, EFT Nos. 29, in the amount of \$ 1,631,339.58. (EFT Nos. 23 through Nos. 28 were reported at the Council meeting dated August 19, 2014).

COUNCIL ACTION REQUESTED

Motion approving net general checking account City vouchers in the range of Nos. 153408 through Nos. 153617 excluding # 153485 in the amount of \$ 1,209,304.37 dated August 18, 2014 through September 4, 2014.

Motion approving the net payroll dated September 5, 2014 in the amount of \$ 335,476.74 and payments of the various payroll deductions in the amount of \$ 210,564.01, plus any City matching payments, where required.

Motion approving property tax settlements dated August 15, 2014 totaling \$1,631,339.58.