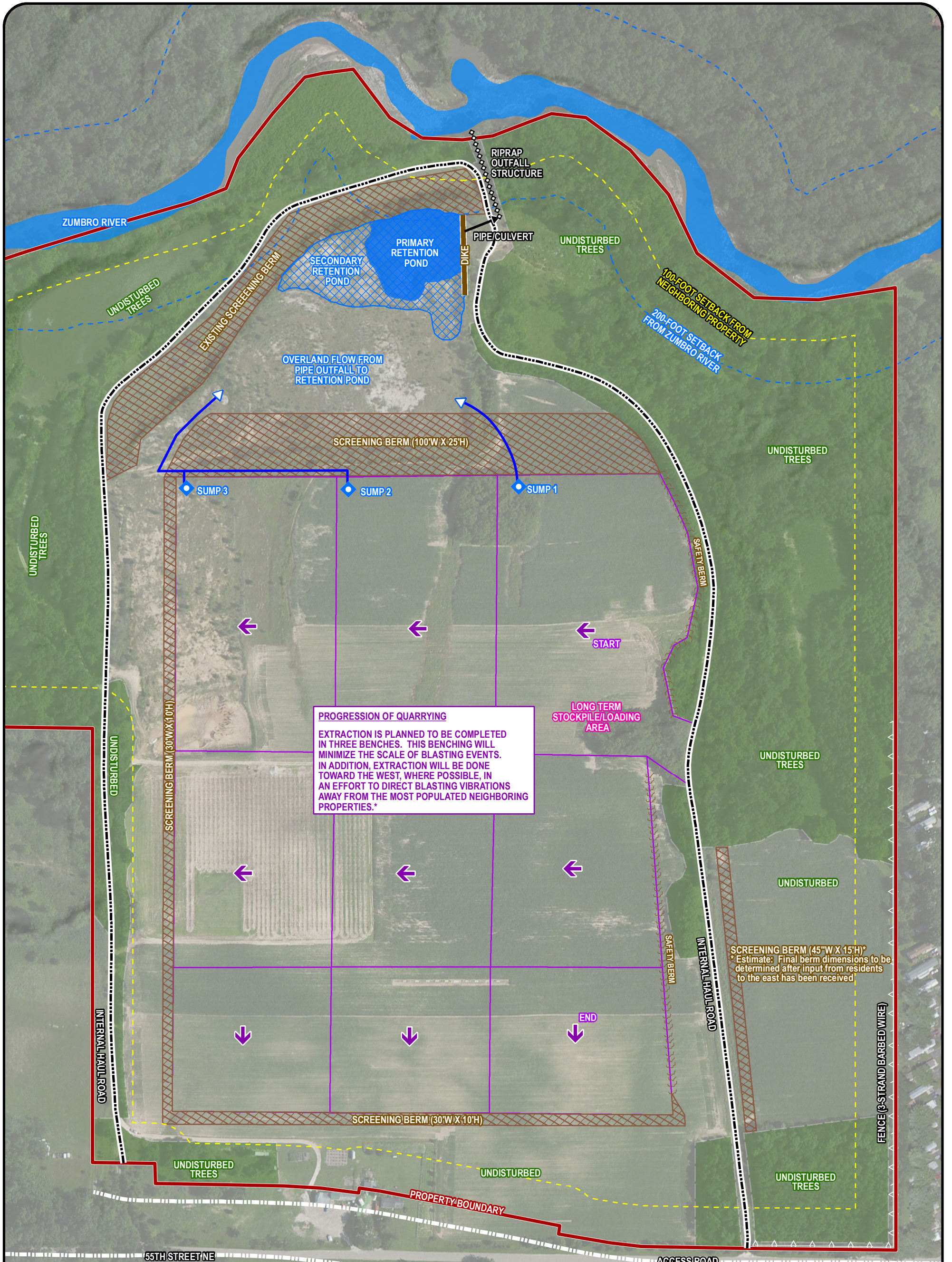


Plans







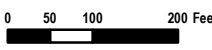
PROGRESSION OF QUARRYING
 EXTRACTION IS PLANNED TO BE COMPLETED IN THREE BENCHES. THIS BENCHING WILL MINIMIZE THE SCALE OF BLASTING EVENTS. IN ADDITION, EXTRACTION WILL BE DONE TOWARD THE WEST, WHERE POSSIBLE, IN AN EFFORT TO DIRECT BLASTING VIBRATIONS AWAY FROM THE MOST POPULATED NEIGHBORING PROPERTIES.*

SCREENING BERM (45"W X 15"H)*
 * Estimate: Final berm dimensions to be determined after input from residents to the east has been received.

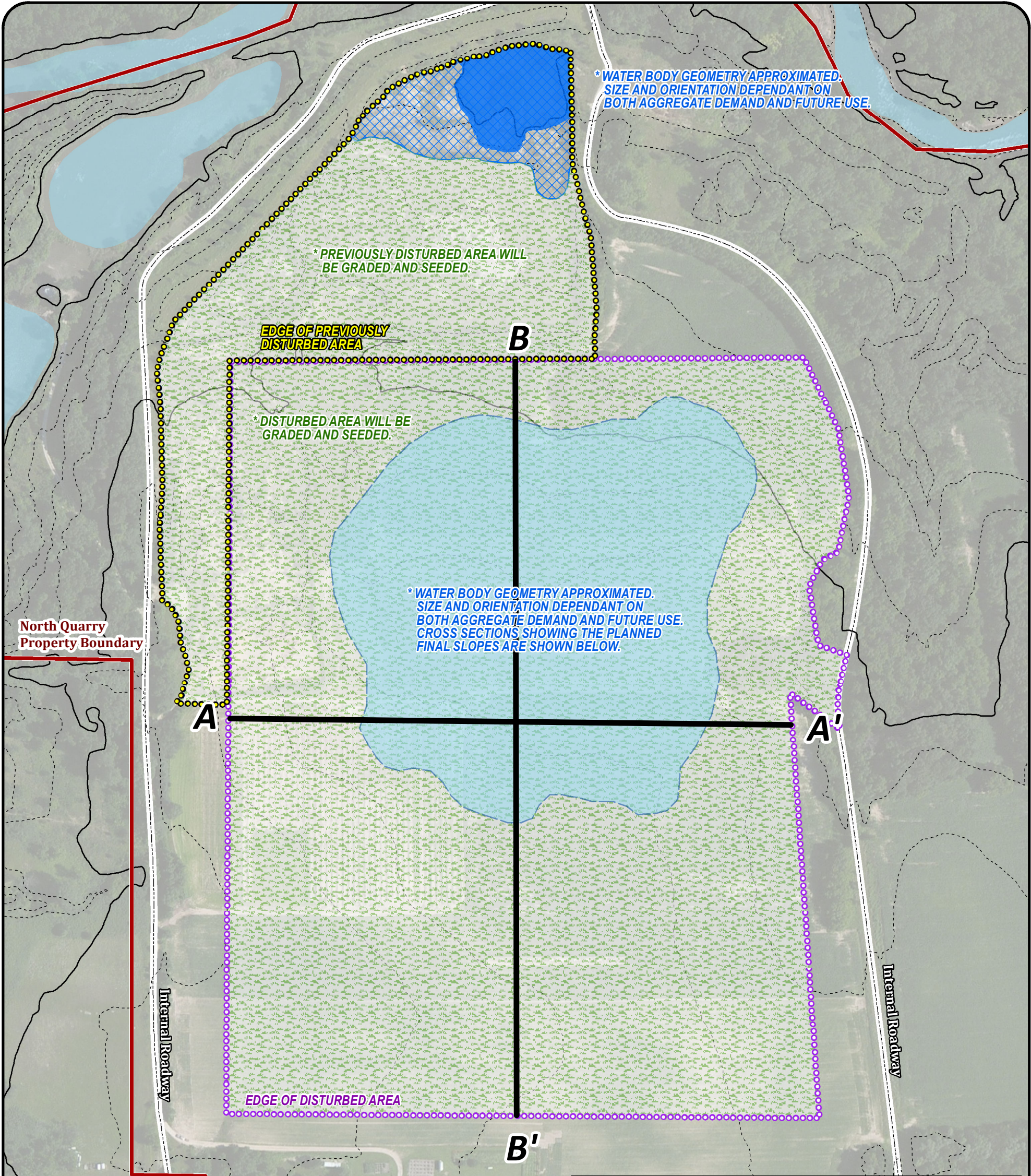
NORTHERN PORTION OF ROCHESTER SAND & GRAVEL PIT
 OPERATIONS PLAN



MILESTONE MATERIALS
 A Division of Mathy Construction Co.

* This plan is a conceptual guide of proposed work progression. Modifications may be made based upon future unforeseen conditions or circumstances.



* WATER BODY GEOMETRY APPROXIMATED. SIZE AND ORIENTATION DEPENDANT ON BOTH AGGREGATE DEMAND AND FUTURE USE.

* PREVIOUSLY DISTURBED AREA WILL BE GRADED AND SEEDED.

EDGE OF PREVIOUSLY DISTURBED AREA

* DISTURBED AREA WILL BE GRADED AND SEEDED.

* WATER BODY GEOMETRY APPROXIMATED. SIZE AND ORIENTATION DEPENDANT ON BOTH AGGREGATE DEMAND AND FUTURE USE. CROSS SECTIONS SHOWING THE PLANNED FINAL SLOPES ARE SHOWN BELOW.

North Quarry Property Boundary

Internal Roadway

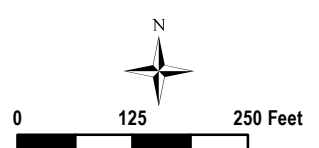
Internal Roadway

Access Road

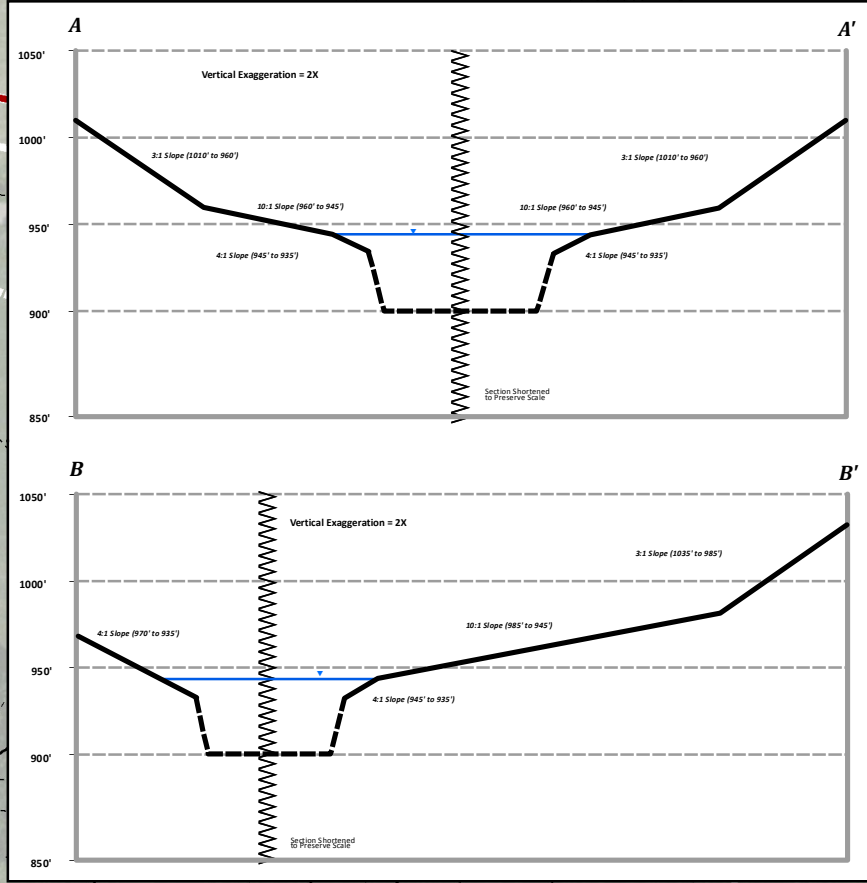
55th Street NE

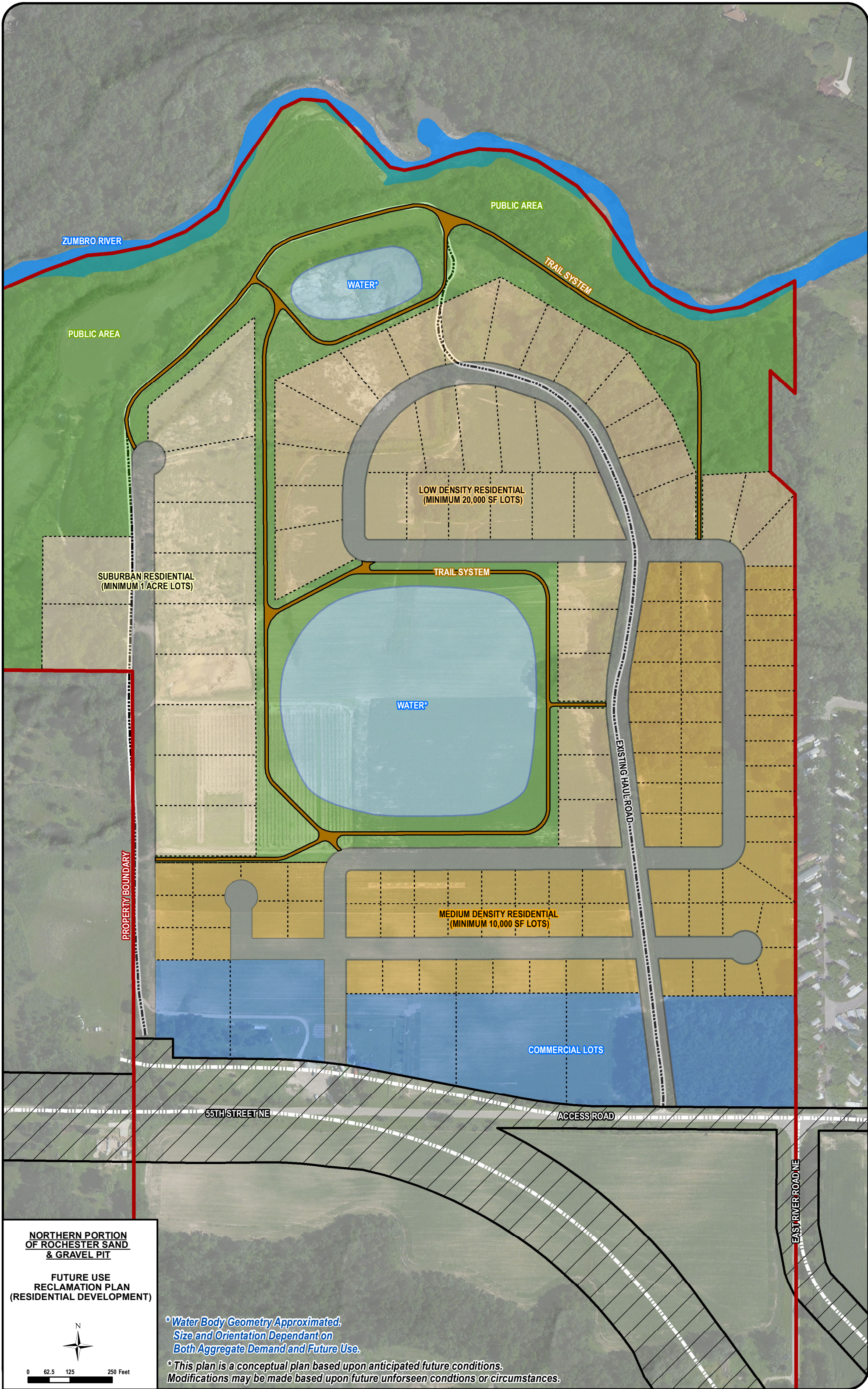
EDGE OF DISTURBED AREA

NORTHERN PORTION OF ROCHESTER SAND & GRAVEL PIT
MINE RECLAMATION PLAN (RECREATIONAL OPEN SPACE)



* This plan is a conceptual plan based upon anticipated future conditions. Modifications may be made based upon future unforeseen conditions or circumstances.





**NORTHERN PORTION
OF ROCHESTER SAND
& GRAVEL PIT**

**FUTURE USE
RECLAMATION PLAN
(RESIDENTIAL DEVELOPMENT)**



0 62.5 125 250 Feet

**Water Body Geometry Approximated.
Size and Orientation Dependant on
Both Aggregate Demand and Future Use.*

**This plan is a conceptual plan based upon anticipated future conditions.
Modifications may be made based upon future unforeseen conditions or circumstances.*



LONG TERM STOCKPILE/LOADING AREA

55TH STREET NE

ACCESS ROAD

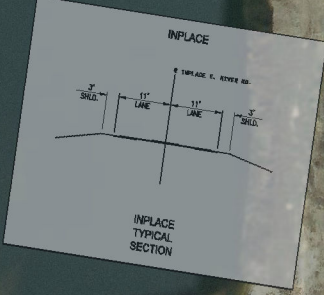
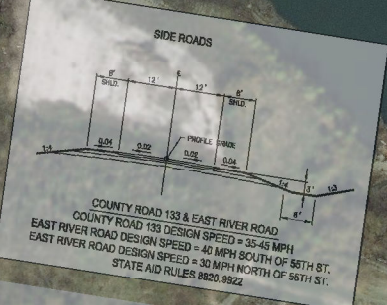
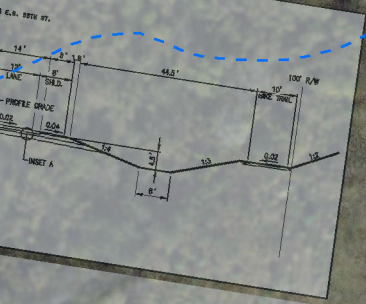
EAST RIVER ROAD NE

EAST RIVER ROAD

55TH STREET NE

EAST RIVER ROAD NE

E.B. 55TH STREET



NORTHERN PORTION OF ROCHESTER SAND & GRAVEL PIT
HAUL TRAFFIC ROUTE*

MILESTONE MATERIALS
 A Division of Matfy Construction Co.

* APPLIES ONLY TO ROCHESTER SAND & GRAVEL AND MILESTONE MATERIALS HAUL TRAFFIC

TO ROCHESTER SAND & GRAVEL MAIN ENTRANCE



Fugitive Dust Control Plan

FUGITIVE DUST CONTROL PLAN

for

ROCK CRUSHING and PROCESSING OPERATIONS

Crushing Operations and Permitted Aggregate Sites in
Wisconsin
Minnesota
Iowa
Michigan

Milestone Materials
920 10th Avenue North
Onalaska, WI 54650
Phone (608) 783-6411

Facility Contact Personnel
Phone (608) 783-6411

Tim Jones - Vice President
Tara Wetzel - Environmental Manager

Fugitive Emissions Control Plan

Milestone Materials recognizes the need for a comprehensive and consistent company policy that outlines control measures, activities, and management options that contribute to a reduction in fugitive emissions from crushing, processing, and transporting of non-metallic mineral aggregates at aggregate mine locations. This plan specifies potential fugitive emissions sources, appropriate control options, operator responsibilities and responsible persons, and record keeping requirements for maintaining documentation of plan use.

I. POTENTIAL FUGITIVE EMISSION SOURCES

- A. Transport of shot rock to crusher
- B. Crushing Operations
- C. Screening Operations
- D. Conveying of Aggregate Products
- E. Stockpiling and Stockpile Maintenance
- F. Truck Transport of Final Products
- G. Total Facility

II. FUGITIVE EMISSIONS CONTROL OPTIONS

- A. Water Spray Application
- B. Shrouding
- C. Chemical Dust Suppressant Application
- D. Drop Height Management
- E. Site Traffic Speed Control
- F. Timing Management
- G. Climatic Influence
- H. Paving/Sweeping

III. RESPONSIBLE PERSON / RESPONSIBILITIES

- A. Maintain Control Equipment in Operable Condition
- B. Evaluate Fugitive Emissions and Need for Control Application
- C. Maintain Access to Water Sources as Needed
- D. Enforce Speed Limits on Process Vehicular Traffic
- E. Utilize Management Options - Plan Awareness
- F. Document Control Activities

IV. RECORD KEEPING / ACTIVITY DOCUMENTATION

- A. Document Material Throughput
- B. Document Suppressive Activity - Amount and Type

I. Potential Fugitive Emission Sources and Management Controls

A. Transport Shot Rock to Crusher - Loader traffic to and from the primary crusher from the shot rock or rubble pile may create excess fines in the tire lanes when surface moisture conditions are dry. Loader operators should scrape and replace traffic lane aggregates when necessary to reduce surface fines. Water may be added as necessary to maintain fugitive suppression.

B. Crushing Operations - Each reduction phase of the crushing process has the potential to generate fugitive emissions. Primary crushing typically exhibits the least fugitive generation, with each successive reduction having a greater potential for emissions. Each facility or crushing spread has spray equipment on site, including pumps, hose, spray nozzles, and spare parts. Spray nozzle location and water application rate is determined by the operator to provide maximum control under situational circumstances. The nozzle or nozzles may be located on one crusher or all crushers at the facility, depending on the needed control.

C. Screening Operations - Screening operations may generate fugitive emissions and are particularly susceptible to wind and low moisture conditions. The initial screen may have adequate material moisture for good emissions control in most circumstances, but as with the reduction phase, each successive screening operation has an increased potential for emissions, with decreased material moisture contents and finer fractions. Water addition during crushing typically exhibits the best control for screening operations. When water applications are ineffective, shrouding may be added to the screen units to minimize wind influence on the under-size fraction. Severe conditions may require that screen units be re-oriented to minimize wind influence on the screen face.

D. Conveying of Aggregate Products - Conveyance of rock products during the processing of aggregates exhibits the least potential for fugitive emissions of all the processes at a facility. The drop or transfer points between processes and conveyors provide the most opportunity for emissions, but are typically the easiest to control. Wind and/or low moisture conditions may be abated by water application, shrouding of the transfer point, enclosure hoods and boots, and minimizing the drop height between transfer points. For normal operations, application of a single management tool may be very effective in controlling emissions. Extreme conditions of wind and low aggregate moisture may necessitate the use of two or more of the available control options to provide adequate emissions reduction.

E. Stockpiling and Stockpile Maintenance - Stockpiling operations at crushing facilities consist of placing aggregates in storage piles with stackers or front-end loaders. Stackers are typically adjustable; so drop height to the pile can be controlled as with other conveyors. Loader transfer results in fewer emissions from dumping, but greater potential from the loader traffic and tire contact with generated fines. Travel roads may be sprayed with water or chemical dust suppressant for longer lasting control. Scraping and application of new aggregate can also be effective in controlling fugitive emissions from this operation. In quarries where travel distances are greater or material tendencies exhibit greater fugitive potential, traffic lanes may be paved and/or swept as more intensive management practices.

Fugitive emissions from stockpiles are highly dependent on aggregate gradation, weather, location, stockpile age, and amount of loading face activity. Aged stockpiles generally exhibit lower fugitive emissions than freshly crushed aggregate materials. In areas where one or more of the listed influences are responsible for emissions above acceptable levels, water application to the stockpile exterior can provide adequate control. Intermittent applications may be necessary when emission conditions are persistent. Orienting the working face to avoid cross-winds can also be an effective management tool for lowering emissions.

F. Truck Transport of Final Product - Truck traffic in the area of crushing operations has the potential to generate excessive surface fines on haul roads. While climatic and situational circumstances can contribute to effective controls on a short-term basis, other more intensive and continuous practices are usually required to maintain control of fugitives from this source. Paving, sweeping, watering, chemical application and speed controls are the most effective options for controlling fugitive emissions from truck traffic. Any one or more of these management options may be incorporated into routine operations to provide continuous benefit.

G. Total Facility - Minimizing the emissions from fugitive sources at a crushing and processing facility requires a commitment of resources from top-level management, knowledge of potential contributing factors on the part of operations level personnel, and a common-sense application of available management options to provide significant control of fugitive emissions from crushing operations. The crushing operations foreman is trained to recognize state and federal opacity limits for various processes, continually evaluate operating conditions and resulting opacities, and apply appropriate controls to provide compliant operation. The foreman or other company responsible personnel document production, conditions, and controls to demonstrate compliance with permit conditions.

II. Fugitive Emissions Control Options

A. Water Spray Application - Water may be added directly to aggregate product with spray nozzles at any phase of the production cycle. Each facility is equipped with adequate equipment to make multiple-point application of water if needed. The person responsible for plant operations decides where application affords the best control efficiency for current conditions. In addition to material control, the plant foreman is responsible for water application to site roads and stockpiles as necessary to maintain acceptable site opacity.

B. Shrouding - Shrouds may be constructed and maintained on any process equipment where it affords fugitive emissions control or may be used only on a site-specific or equipment-specific basis. Shrouds used for emissions control must meet MSHA safety standards.



C. Chemical Dust Suppressant Application - For climatic conditions where natural moisture is deficient and traffic volume is a contributing emissions source, the application of persistent controls such as calcium chloride or forest product resins may be necessary to provide longer- lasting effective control. Applications may be supplemented with truck applied water as needed.

D. Drop Height Management - Facility foreman is responsible for minimizing drop height at all material transfer points, including stacker and loading operations.

E. Site Traffic Speed Control - Facility foreman or company responsible official enforces appropriate speed limit in the production area. Speed limit determination is influenced by site-specific conditions and may be lowered at the foreman's discretion, to provide greater control influence.

F. Timing Management - The supervisor of crushing operations may change scheduling of processing or blasting in a particular location or quarry to take advantage of climatic influence in providing additional emissions suppressive effect. While this option is variable, it can provide significant benefit in problematic geologic formations or urban locations.

G. Climatic Influence - Climate variations during the crushing season may have significant impact on emissions depending on precipitation frequency and duration. Mid-western locations provide opportunity for natural suppressive effects during the processing season, either by direct precipitation on process materials, or through retained moisture from those events. Seasonal variations in precipitation amounts, heat degree days, and wind determine the degree to which additional control activities are needed to meet permit terms and opacity limits.

H. Paving/Sweeping - Haul and access roads at some locations receive heavy traffic volume and may generate road surface fines in unmanageable quantity. For these extreme conditions, paving with hot-mix asphalt or recycled asphalt pavement and/or sweeping may be helpful in reducing emissions on an ongoing basis. More intensive management practices such as these are normally supplemented with water spray or chemical suppressants to provide maximum emissions reduction.

III. Responsible Person/ Responsibilities

A. Maintain Control Equipment in Operable Condition - The facility foreman is responsible for managing emissions control and is required to maintain all suppressive equipment in operational condition according to the Malfunction Prevention and Abatement Plan. He must maintain adequate spare parts inventory to accommodate changing conditions and equipment replacement. All fugitive dust control equipment for the crushing operations must be inspected daily. Daily inspection of fugitive dust control equipment is recorded on the daily tracking form.



B. Evaluate Fugitive Emissions and Need for Control Application - The facility foreman or other person designated as being responsible for operations management is required to evaluate conditions, process variables, and fugitive emissions on a continuous basis during crushing operations. From this evaluation, the responsible person determines whether opacity and emissions are within allowable levels, and if not, to apply available control options as needed to gain the required level of fugitive control.

C. Maintain Access to Water Sources as Needed - The foreman is responsible for locating and maintaining access to water resources to provide adequate fugitive emissions control. The water resource utilized may be truck delivered, well pumped, quarry or pit groundwater, or surface water available at the site.

D. Enforce Speed Limits on Process Vehicular Traffic - The facility foreman/responsible person must determine if enforced speed limits are effective in controlling fugitive emissions from that source. He has authority to reduce vehicular speeds as appropriate to gain the needed control. Site speed limits affect all process vehicles, including loaders, trucks, and visitors.

E. Utilize Management Options - The facility foreman has authority to implement any available control option at his discretion. If conditions do not respond favorably to applied controls, the foreman may terminate production until additional resources are available or site conditions change. If available control options are ineffective in maintaining fugitive emissions at acceptable levels, the foreman is required to report that circumstance to company management for further action.

F. Document Control Activities - The foreman or other person designated by the company as responsible for facility compliance must maintain daily records of production throughput, fugitive emissions suppressive control activities, and relative weather conditions, to comply with permit terms while the site is active. Records for current year production are maintained at the facility and at the company headquarters for an additional 4 years.

IV. Recordkeeping / Activity Documentation

The company is committed to accurate and complete documentation of crushing process parameters that influence and indicate compliance with applicable state and federal regulations. The facility foreman / responsible party is required to record important process information on a daily basis while the site and crushing operations are active, and to deliver the records to the company office for storage and reference for an additional four years.



V. PM10 at the Fence Line

For the past several years, extensive fence line monitoring of non-metallic mines sites has been well documented with values published by various state agencies and industry. Of particular interest are sixteen facilities that operated a total of eighteen PM10 monitors over a 5-year period from 2010 to December 2015 with a total of 2,478 valid 24-hour samples meeting US EPA methodology for sample collection. The summary of the PM10 fence line monitoring samples are as follows:

‘The average reading from all samples as of December 2015 is 13.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). This is less than 10% of the PM10 ambient air standard. Of those 2478 data points, one sample recorded a value higher than the PM10 standard of 150 $\mu\text{g}/\text{m}^3$. Evaluation of the filter shows the high value appears to have been caused by farming activities in a field next to the monitor; the nearest industrial sand mine facility was not operating the day the ambient sample was taken.¹’

Based on the extensive monitoring conducted by the nonmetallic mining industry under the direct control of a state agency plus additional peer-reviewed ambient air studies from similar nonmetallic mine operations, it is conclusive that the activities of aggregate mining do not pose a concern for exceeding PM10 ambient air standards at the fence line.

¹ ‘Strategic Analysis for Public Review’, Wisconsin Department of Natural Resources Industrial Sand Mining, June 2016





Noise Mitigation Plan

Milestone Materials – North Quarry

Noise Mitigation Plan

Scope and Purpose

This noise mitigation plan describes the scope of noise reduction provisions that will be employed at the North Quarry to minimize noise and impacts to residents. The scope of the plan includes noise limitations and mitigation measurements, including but not limited to, industry best management practices along with economically and technologically feasible equipment retrofits, site configurations, and engineering and administrative controls.

The purpose of the Noise Monitoring Plan is to comply with the Conditional Use Permit issued by Cascade Township.

Noise Limitations

The Noise Standards are dependent on the noise area classification of the receiver. For residential housing, the allowable L_{10} daytime and nighttime noises are 65 dBA and 55 dBA, respectively, which can be exceeded ten percent of the time for an hour survey. Subsequently, the allowable L_{50} daytime and nighttime noises are 60 dBA and 50 dBA, respectively, which can be exceeded fifty percent of the time for an hour survey. Daytime is defined as 7:00 AM to 10:00 PM, and nighttime is defined as 10:00 PM to 7:00 AM. All measurements of sound are made at or within the point of human activity which is nearest the noise source.

Sound level measuring devices must meet Type O, I, II or S specifications under American National Standards Institute. Prior to noise readings, all sound level measuring devices must, at a minimum, be externally field calibrated before and after monitoring using a calibration device of known frequency and sound pressure level. Measurements must be made at least 3 feet off the ground using the A-weighting and fast response characteristics of the sound measuring device. If possible, all measurements should be at least 30 feet from noise reflecting structures, such as buildings. Measurements may not be made in sustained winds or in precipitation which results in a difference of less than ten decibels between the background noise level and noise source being measured. Additionally, the measurements must be made using a microphone which is protected from ambient conditions which would prevent an accurate measurement. Calibration of the sound level measuring device will be conducted annually by the manufacturer.



Background noise correction factors will be used as necessary to isolate the noise source being monitored from other surrounding noise sources¹.

Mitigation Measures

Milestone Materials employs several noise reduction methods to control off-site noise exposures at the property boundaries. Typical noise reduction strategies include berm construction, natural vegetation, trees, natural topography, muffler utilization, power source location, noise deflection and absorption materials, and utilization of white noise back-up alarms. The methods of noise reduction utilized are site dependent and are adapted as needed to ensure noise exposure reductions of the employee and resulting property boundaries.

For the North Quarry site, the following noise reduction techniques will be applied at various locations throughout the property as appropriate:

- Earthen berm construction per the approved Operation Plan,
- Preservation of natural vegetation,
- Trees,
- Natural topography and screening,
- Implementation of haul road traffic patterns to attenuate noise from backup alarms,
- Working mufflers on equipment,
- Prohibition of Jake brake use, and
- Utilization of white noise backup alarms.

Additional noise reduction strategies may be applied as necessary once the site is operational.

Noise Exposure Monitoring for Milestone Materials Employees

Milestone Materials developed a comprehensive Hearing Conservation Program in 1997. As a part of the program, noise monitoring was conducted extensively throughout the Milestone Materials operating area to identify noise exposures that could be further reduced with the implementation of engineering controls. As a result, engineering controls were added and upgraded on many types of operations to lower noise exposures to employees. Managing the noise exposure at the source via engineering controls provided many benefits to the Milestone group, including reduced noise exposures at the property boundaries as a result of noise source reduction techniques.

¹ Minnesota Pollution Control Agency, A Guide to Noise Control in Minnesota (November 2015), describes the process utilized for background noise correction.



Today, the Company has conducted over 1000 noise exposure tests. Milestone Materials maintains the testing commitment to the employees ensuring continued maintenance and reduction of noise exposures throughout the company operations. The knowledge and subsequent benefits gained from several decades of employee noise exposure monitoring are exhibited and realized in the site operations at North Quarry.





Groundwater Monitoring Plan

Example of Typical Permit Conditions:

***Minnesota Department of Natural
Resources Permit Number 1995-5082***

***Milestone Materials
Panhandle Quarry
Olmsted County, Minnesota***



MINNESOTA DEPARTMENT OF NATURAL RESOURCES

Amended
Water Appropriation Permit

Permit Number
1995-5082

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform actions as authorized below. This permit supersedes the original permit and all previous amendments.

Project Name: PANHANDLE	County: Olmsted	Watershed: Root River	Resource: Quarry/Mine	
Purpose of Permit: Quarry Dewatering		Authorized Action: Withdrawal of up to 250.0 million gallons of water per year for quarry dewatering.		
Permittee: MATHY CONSTRUCTION COMPANY CONTACT: STUHR, BETH, (608) 779-6650 920 10TH AVENUE NORTH ONALASKA, WI 54650 (608) 779-6608		Authorized Agent: N/A		
To Appropriate From: Quarry/Mine : by means of a stationary pump at a rate not to exceed 3000 gpm Point(s) of Taking UTM zone 15N, 537568m east, 4854975m north Section 5, T104N, R14W				
Authorized Issuer: Corey Hanson	Title: Area Hydrologist	Issued Date: 12/29/2014	Effective Date: 12/29/2014	Expiration Date: Long-Term Appropriation

This permit is granted **subject to the following CONDITIONS:**

LIMITATIONS: (a) Any violation of the terms and provisions of this permit and any appropriation of the waters of the state in excess of that authorized hereon shall constitute a violation of Minnesota Statutes, Chapter 103G. (b) This permit shall not be construed as establishing any priority of appropriation of waters of the state. (c) This permit is permissive only. No liability shall be imposed upon or incurred by the State of Minnesota or any of its employees, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the Permittee relating to any matter hereunder. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the Permittee, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the Permittee, for violation of or failure to comply with the provisions of the permit or applicable provisions of law. (d) In all cases where the doing by the Permittee of anything authorized by this permit shall involve the taking, using, or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the Permittee, before proceeding therewith, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests necessary therefore. (e) This permit shall not release the Permittee from any other permit requirements or liability or obligation imposed by Minnesota Statutes, Federal Law, or local ordinances relating thereto and shall remain in force subject to all conditions and limitations now or hereafter imposed by law. (f) Unless explicitly specified, this permit does not authorize any alterations of the beds or banks of any public (protected) waters or wetlands. A separate permit must be obtained from the Department of Natural Resources prior to any such alteration.

WATER USE REPORTING: (a) **FLOW METER** The Permittee shall equip each installation for appropriating or using water with a flow meter, unless another method of measuring the quantity of water appropriated to within ten (10) percent of

CONDITIONS (Continued from previous page)

actual amount withdrawn is approved by the Department. (b) **REPORTS** Monthly records of the amount of water appropriated or used shall be recorded for each installation. Such readings and the total amount of water appropriated or used shall be reported annually to the Director of DNR Ecological and Water Resources, on or before February 15 of the following year, via the MNDNR Permitting and Reporting System (MPARS) at www.mndnr.gov/mpars/signin. Any processing fee required by law or rule shall be submitted with the records whether or not any water was appropriated during the year. Failure to report shall be sufficient cause for terminating the permit 30 days following written notice. (c) **TRANSFER OR ASSIGNMENT** Any transfer or assignment of rights, or sale of property involved hereunder shall be reported within 90 days thereafter to the Director of DNR Ecological and Water Resources. Such notice shall be made by the transferee (i.e., new owner) and shall state the intention to continue the appropriation as stated in the permit. This permit shall not be transferred or assigned except with the written consent of the Commissioner. (d) **MODIFICATION** The Permittee must notify the Commissioner in writing of any proposed changes to the existing permit. This permit shall not be modified without first obtaining the written permission from the Commissioner.

COMMISSIONER'S AUTHORITY: (a) The Commissioner may inspect any installation utilized for the appropriation or use of water. The Permittee shall grant access to the site at all reasonable times and shall supply such information concerning such installation as the Commissioner may require. (b) The Commissioner may, as he/she deems necessary, require the Permittee to install gages and/or observation wells to monitor the impact of the Permittee's appropriation on the water resource and require the Permittee to pay necessary costs of installation and maintenance. (c) The Commissioner may restrict, suspend, amend, or cancel this permit in accordance with applicable laws and rules for any cause for the protection of public interests, or for violation of the provisions of this permit.

PUBLIC RECORD: All data, facts, plans, maps, applications, annual water use reports, and any additional information submitted as part of this permit, and this permit itself are part of the public record and are available for public inspection at the offices of DNR Ecological and Water Resources. The information contained therein may be used by the Division as it deems necessary. The submission of false data, statements, reports, or any such additional information, at any time shall be deemed as just grounds for revocation of this permit.

MONITORING REQUIREMENTS: Minnesota Statutes 103G.282 authorizes the Department of Natural Resources to require permittees to install and maintain monitoring equipment to evaluate water resource impacts from permitted appropriations. You may be required to modify or install automated measuring devices and keep records for each installation. The frequency of measurements and other requirements will be based on quantity of water appropriated, source of water, potential connections to other water resources, nature of concern, and other relevant factors.

DROUGHT PLANNING: In accordance with M.S. 103G.293, all permits must be consistent with the drought response plan detailed in the Statewide Drought Plan at http://files.dnr.state.mn.us/natural_resources/climate/drought/drought_plan_matrix.pdf.

WATER USE CONFLICT: If notified by the DNR that a water use conflict is suspected and probable from your appropriation, based on confirmation of a formal well interference complaint or a preliminary hydrologic assessment, all appropriation authorized by this permit must cease immediately until the interference is resolved. The permittee may be required to obtain additional data to support the technical analysis, such as domestic well information within a radius of one and one-half miles of the production well. The permittee and impacted party may engage in a negotiated settlement process and there may be modifications made to this permit in support of conflict resolution.

CONTINGENCY: If directed by DNR Ecological and Water Resources to cease pumping, the permittee agrees to withstand the results of no appropriation as stated in the contingency statement submitted with the application.

INTAKE: All pump intakes must be screened to prevent fish from being drawn into the system.

INVASIVE SPECIES - EQUIPMENT DECONTAMINATION: All equipment intended for use at a project site must be free of prohibited invasive species and aquatic plants prior to being transported into or within the state and placed into state waters. All equipment used in designated infested waters, shall be inspected by the Permittee or their authorized agent and adequately decontaminated prior to being transported from the worksite. The DNR is available to train inspectors and/or assist in these inspections. For more information refer to the "Best Practices for Preventing the Spread of Aquatic Invasive Species" at http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf. Contact your regional Invasive Species Specialist for assistance at www.mndnr.gov/invasives/contacts.html. A list of designated infested waters is available at http://files.dnr.state.mn.us/eco/invasives/infested_waters.pdf. A list of prohibited invasive species is available at www.mndnr.gov/eco/invasives/laws.html#prohibited.

INFESTED WATERS - WATER TREATMENT REQUIREMENTS: Surface water appropriators from waters listed as

CONDITIONS (Continued from previous page)

containing invasive species in http://files.dnr.state.mn.us/eco/invasives/infested_waters.pdf are required to contact 651-259-5100 or 1-888-MINN-DNR to obtain information from the DNR Division of Ecological and Water Resources on specific invasive species water treatment requirements.

WATER CONSERVATION: All practical and feasible water conservation methods and practices must be employed to promote sound water management and use the least amount of water necessary, such as reuse and recycling water, water-saving devices, and water storage.

DISCHARGE AUTHORIZATION: This permit is valid only in conjunction with all required discharge authorizations from local, state, or federal government units.

RESPONSE TO FUTURE WELL COMPLAINTS: Should the availability of water to existing domestic water well be interrupted or cease and it is believed to be a result of the permittee's dewatering activities, the complainant may submit details of the problems to the permittee. Within 12 hours of the receipt of the complaint, the permittee must contact a licensed well contractor who has sufficient credentials (e.g. is familiar with the local geology, local wells, well drilling, well repair and located in the local proximity) to investigate the complaint. The well contractor shall advise the permittee and the complainant of the timetable for the initial investigative visit. The initial investigative visit by the well contractor must be paid for by the permittee. Should the initial investigative visit determine that the permittee's dewatering activities have caused an interruption to the availability of water to the well, the permittee shall incur the expenses required to remedy the situation. Costs include, but are not limited to, the well investigation by consultants, well repairs, and well construction. The permittee shall provide a safe and adequate drinking water supply within 12 hours of notification and until either the water supply has been re-established to the homeowner, or the investigation has determined that the lack of water available to the well is not associated with the permittee's dewatering activities. Within 48 hours of receiving a well complaint, the permittee shall notify the DNR Area Hydrologist that a complaint was received. If the complaint is unresolved, the complainant may choose to submit a formal well interference complaint to the DNR Area Hydrologist. The DNR will then conduct a technical review, determine the probable cause of the problem, and take appropriate action under the Water Appropriations Permit Program.

ATTACHMENTS: Attachment A (Monitoring Plan, December 29, 2014) is hereby made a part of this permit.

ANNUAL UPDATE: Prior to April 15 of each year, the permittee shall request to meet with the Groundwater Protection Hydrologist concerning the status of mine progression, monitoring data, reporting, adequacy of pumping rates, and total annual volume, etc.

cc: Jeanne Daniels, EWR District Manager
Peters, Andrew, Contact; Mathy Construction Company
Philip George, Conservation Officers, Rochester #2
Terry Lee, County, Olmsted
Floyd Whitaker, SWCD, Olmsted SWCD

Attachment A.

Mathy Construction Company Panhandle Quarry Expansion
MONITORING DETAILS – Groundwater Monitoring Plan
Amended Permit 1995-5082

Groundwater Level Monitoring

The GROUNDWATER LEVEL MONITORING WELL REQUIREMENT condition of Amended Permit 1995-5082 requires that groundwater levels in the monitoring wells listed in Table 1 be measured and reported to the DNR as described below. In addition to the monitoring wells the mine sump water level, pumping rates and location must be monitored and reported.

Table 1. Monitoring Wells

<u>Well</u>	<u>Unique Number</u>
MW-1	778568
MW-2	778569
MW-3	778570
MW-4	778571

Measurement Frequency

Groundwater level measurements must be collected from each of the monitoring wells on a **MONTHLY** basis to correct the data logger measurements for drift. A barologger is also required to correct data logger measurements for barometric pressure changes. The mine sump water level must also be monitored on a **MONTHLY** basis at the same time as the monitoring wells. If the water within a well or the sump is frozen, it should be noted, but no measurement is required.

Accuracy

Groundwater levels must be measured from the top of the casing to the nearest hundredth of a foot. Measurements must be reported as depth from the top of the casing and as an elevation in 1988 Datum or equivalent standard datum.

The sump water elevation must be reported to the nearest one foot increment. This level must be correlated to the 1988 Datum or equivalent standard datum for reporting purposes.

Reporting

Water level readings must be reported electronically to the Minnesota DNR Groundwater Level Coordinator (gwlevelcoor.dnr@state.mn.us) on a **QUARTERLY** basis (January 1, APRIL 1, July 1, and October 1, of each year) or upon request by DNR Ecological & Water Resources. The permittee shall utilize the Excel Spreadsheet DNR template format for reporting purposes. This template is available via the DNR's website at the following address: http://files.dnr.state.us/waters/watermgmt_section/appropriations/gw_level_measurement_reporting_template.xls.

Monitoring Plan Reassessment

This monitoring plan can be reviewed and amended at any time by DNR Ecological & Water Resources. After a substantial number of years of additional data collection and analysis, or change in operations, the permittee may recommend the DNR consider a change in the monitoring requirements for this permit.

Authorized Signature

Joe Richter
Groundwater Protection Hydrologist

Date



Storm Water Pollution Prevention Plan

Storm Water Pollution Prevention Plan for Nonmetallic Mining



Milestone Materials
North Quarry

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Storm Water Pollution Prevention Plan

Nonmetallic Mining

1.0 Introduction

1.1 Purpose of the Storm Water Pollution Prevention Plan

The purpose of the Storm Water Pollution Prevention Plan (SWPPP) is to prevent contaminants from polluting waters of the State through discharge in storm water. The SWPPP establishes guidelines necessary to create an effective and functional program for pollution prevention. This will be accomplished in the following three steps:

- Identify possible sources of contamination
- Take actions to eliminate or reduce these sources of contamination
- Treat or contain excessive storm water pollutants that can not be removed from the storm water.

This plan applies to discharges of process wastewater (i.e. dewatering and aggregate washing) and storm water (internally and externally drained) from nonmetallic mining operations to surface waters or groundwaters directly or indirectly via a storm sewer or other conveyance.

1.2 Pollution Prevention Team

The pollution prevention team is responsible for developing and implementing the SWPPP. The pollution prevention team includes the following members.

- Area Manager is responsible for implementation of the SWPPP. Duties include facility compliance with the Best Management Practices (BMP) and other source area controls identified in this plan.
- Plant Foreman is responsible for ensuring BMPs remain effective and in place via regular inspections, monitoring and recordkeeping.
- Environmental Department is responsible for developing the plan, preparing and submitting reports, and serving as facility contact with the regulatory agencies.

2.0 Site Conditions

2.1 Site Description

Nonmetallic mining activities generally occur within aggregate quarries or sand and gravel pits. Nonmetallic mining operations include sites and equipment

engaged in excavation or processing of sand, gravel, crushed stone, or other similar activities that result in a discharge of storm water, aggregate wash water, dewatering water or vehicle wash water.

Most quarries and pits are naturally, internally drained and will not discharge storm water off site. For all sites, a site map is attached depicting the site layout along with drainage outfalls and storm water controls (See Attachment #1 for Site Map). However, Best Management Practices will be adapted as appropriate at internally drained sites.

2.2 Site Potential Pollutants

The facility has the following potential pollutants associated with activities at the site.

- #2 Fuel Oil
- Lubricating Oils
- Grease
- Antifreeze
- Aggregate and Soil Fines

3.0 Best Management Practices

3.1 Education

- The SWPPP is reviewed periodically to discuss plan content, implementation and continued compliance activities associated with the permit. Review of the SWPPP may be conducted during the annual safety meeting, weekly toolbox talks or periodic environmental audits.
- Employees are required to take an active role in pollution reduction via awareness of SWPPP responsibilities, appropriate maintenance activities, drip pan and absorbent use, and proper handling of petroleum products.
- Employee training is conducted annually to maintain the components and goals of the SWPPP. Records of training are kept at the office in Onalaska.

3.2 Good Housekeeping Practices

- All fuel tanks and lubricant containers shall utilize drip pans or absorbent material for nozzle storage between fueling. An alternative is to store the nozzle in an upward position so that product cannot drip from the end of the nozzle.
- Absorbents and drip pans are utilized to control drips and leaks.
- All spills are promptly cleaned up to eliminate contact with storm water runoff.
- Used absorbents are regularly replaced to reduce storm water exposure potential.

- Waste disposal receptacles will be used to reduce storm water exposure potential. Waste disposal lids shall be closed whenever possible to eliminate contact with storm water.
- Minimize off-tracking of soil and dust materials onto paved surfaces that have storm water runoff potential. If off-tracking occurs on paved haul roads with runoff potential, sweep as necessary to reduce potential contaminant exposure during runoff events.

3.3 Significant Material Handling and Storage

- Minimize exposure of raw materials to reduce or eliminate potential sources of contamination during runoff events.
- Fuel transfers, including hose connect and disconnect from the receiving tank, will be monitored to insure that spills do not occur.
- Petroleum products are secured after each operating cycle.
- Drip pans and absorbents are utilized to control drips and leaks.
- When possible, all lubricants and grease are stored inside the plant service trailer or other on-site building.
- Placement of aggregate stockpiles shall be located in areas of reduced exposure potential whenever possible.

3.4 Repair and Maintenance Procedures

- Engines, pumps and gearboxes will be inspected and serviced as needed to eliminate leaking seals, fuels lines and gaskets. Drip pans, absorbents, or other acceptable means will be utilized to contain leaks during operation until company maintenance personnel can repair the problem.
- Plant employees are instructed in proper lubrication procedures for plant equipment. Manufacturers specifications are followed to eliminate overflow of gearboxes and crankcases. Greasing of bearings and wear surfaces is carefully monitored to eliminate unnecessary grease contact with the ground. Overflow from bearings is collected and disposed of with contaminated absorbent material.

3.5 Construction of Containment or Settling Ponds

- For sites where natural containment does not occur, the site manager may elect to construct berms or temporary basins for collection and control of storm water. Necessity of construction will be based on slope of site, area drained, soil type, and proximity to receiving waters. Other influences may be considered on a site-specific basis as needed to fulfill the purpose of the plan.
- Storm water collected in the on site basins will be inspected by site personnel for evidence of petroleum sheen or odor. If no evidence of contamination is apparent, the water may be released by gravity flow or by pumping. Release of water must be done in a manner that will not induce erosion or release water with high sediment loading into receiving waters. Water collected in on

site basins that shows evidence of contamination will have the sheen removed before pumping or will be pumped into disposal tanks for transport to approved disposal facilities. Company environmental manager will be notified before removal and disposition of contaminated water. Any water releases will be documented.

- Settling ponds are utilized, when appropriate, to collect storm water and encourage infiltration or evaporation. Additionally, solids are allowed to settle prior to water discharge.

3.6 Erosion Control Prevention

- Bales, silt fences, rip rap channels, erosion mat, rock berms, grassy swales, vegetated buffers, diversionary measures, perimeter berms and settling ponds are utilized to mitigate and eliminate erosion from potential problem areas, including dewatering discharge location.
- Maintenance of structural and non-structural control measures will be conducted as necessary to maintain treatment efficiency.
- Stabilize areas of bare soil with vegetation or through permanent land cover to control soil erosion.
- Temporary seeding will be used to control critical area erosion, as needed, on a site specific basis. Critical areas may include stockpiled top soil and overburden and non-traffic areas that will support vegetation.
- Permanent seeding will be utilized on reclaimed slopes and permanent site berms.

3.7 Use of Available Resources

- Housekeeping supplies, including drip pans and absorbent materials, are kept on site in the plant service trailer or on-site building. Personnel have access to materials and are instructed in their use.

3.8 Outside Vehicle or Equipment Washing (for moving equipment on and off site)

- Wash water must not discharge from the site via surface discharge. Instead, wash water must remain on site and infiltrate into the ground.
- The use of non-biodegradable, cleaning solvents in the wash water is prohibited.

4.0 Inspections and Monitoring

4.1 Inspections

Inspections are conducted monthly for each permitted site in the state of Minnesota when actively mining or processing aggregate. Inspections include, but are not limited to, an erosion control inspection and an evaluation of structural and non-structural BMP effectiveness.

Additionally, site inspections are conducted each operating day and recorded on the Daily Environmental Tracking Log when an aggregate crusher is on-site. Inspections include, but are not limited to, application of Best Management Practices, absorbent and catch pan use, inspection of petroleum product storage, storm water runoff appearance and water quality.

4.2 Sampling and Monitoring

Varied sampling procedures and schedules are needed for a variety of scenarios at nonmetallic mining sites in Minnesota. The specific sampling requirements for each situation are defined in Attachment 2, Minnesota Supplement.

5.0 Inclusion of Other Documents by Reference

5.1 Spill Policy for Aggregate Operations

Aggregate operations are managed by the Spill Prevention Control & Countermeasures (SPCC) plans or Spill Policy for aggregate operations depending on the volume of petroleum stored at a particular site. The purpose of the Spill Policy and SPCC plan is to prevent spills from petroleum products. The policies include provisions for containment requirements, petroleum product handling, training, and emergency response procedures. Nonmetallic Mining spill records are located at the main office in Onalaska, Wisconsin.

5.2 Malfunction and Abatement Plan

A Malfunction and Abatement Plan addresses the control of pollutants at aggregate operations. The purpose of the plan is to reduce and eliminate excessive pollutant emissions from the operations. The plan includes procedures for product handling, inspections, repair and maintenance of the facility.

5.3 Fugitive Dust Control Plan

A Fugitive Dust Control plan is in place at each aggregate operation. The purpose of the plan is to reduce emissions from fugitive dust, such as unpaved haul roads. The plan suggests various ways to control fugitive roadway dust, mainly watering of the roads. Water is sprayed evenly on the road surface to minimize water runoff and maximize dust control. Other suggested dust control methods include chemical application, such as calcium chloride or magnesium chloride. Careful consideration to the impact of surrounding waterways is made prior to application of a chemical.

6.0 Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for providing false information, including the possibility of fine and imprisonment for knowing violations.

Tara E. Wetzel
Signature

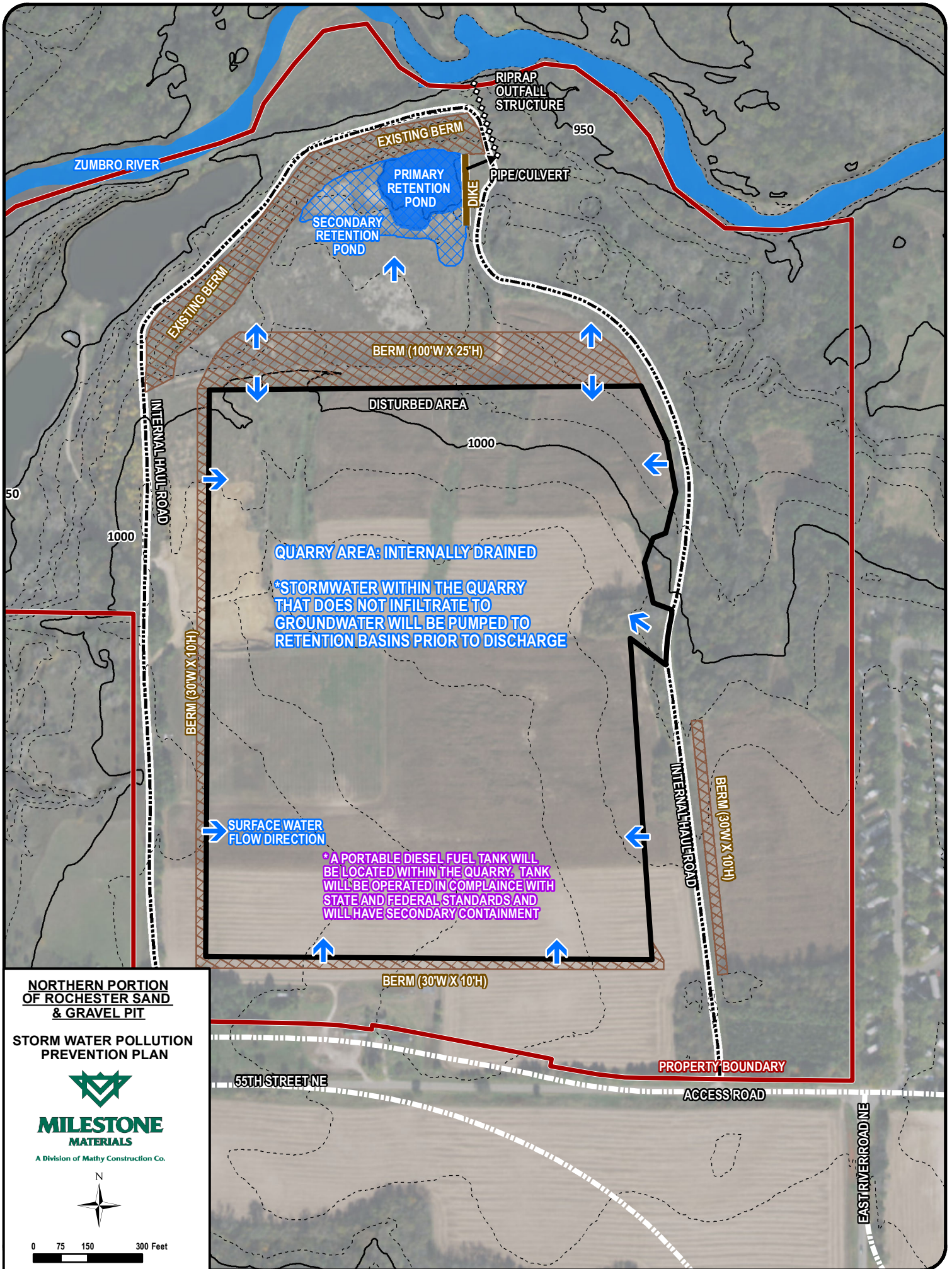
October 17, 2016
Date

Tara Wetzel
Printed Name

Environmental Manager
Title

Attachment 1

Site Map



**NORTHERN PORTION
OF ROCHESTER SAND
& GRAVEL PIT**

**STORM WATER POLLUTION
PREVENTION PLAN**



**MILESTONE
MATERIALS**

A Division of Mathy Construction Co.



0 75 150 300 Feet

Attachment 2

Minnesota Supplement

The purpose of this supplement is to outline additional requirements for sites located in Minnesota.

Schedule for Preventative Maintenance of BMPs:

- Any BMPs which are not functioning properly must be replaced, maintained or repaired within 7 calendar days of discovery. If the BMP cannot be replaced, maintained or repaired within 7 calendar days, effective backup BMP shall be implemented until the original BMP is restored.
- Silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.
- Temporary and permanent sediment basins must have the sediment removed once the depth of the sediment collected in the basin reaches ½ of the storage volume. The removal of sediment must be completed within 72 hours of discovery or as soon as field conditions allow access.

Recordkeeping and Reporting:

- Inspections must be completed monthly for active operations. All inspections and resulting maintenance/corrective actions must be recorded and retained with this plan.
- A minimum of one site inspection must be completed during a snow melt event at all active operations each calendar year.
- Additional recordkeeping required for site dewatering. (See site dewatering section.)

Storm water Monitoring Requirements:

- Two samples shall be collected annually at each stormwater discharge point at an active operation and analyzed for total suspended solids (TSS) in order to determine the annual average concentration.

Site Dewatering Requirements:

- Dewatering or basin draining must be discharged to a control device on the project site whenever possible, such as a temporary or permanent sedimentation basin or infiltration device. Discharges from control devices must be visually checked to ensure adequate treatment.

- Site dewatering permitted by Minnesota Pollution Control Agency General Permit MNG490000 requires:
 - One sample must be collected quarterly from each actively discharging outfall point.
 - Each sample must be analyzed for the following:
 - Total Suspended Solids (Maximum 30 mg/L)
 - pH (Range of 6.5 to 8.5)
 - Recordkeeping required:
 - Average Monthly Flow, million gallons per day (mgd)
 - Maximum Monthly Flow, mgd
 - Total Monthly Flow, million gallons (MG)

- Dewatering discharge outlet must be protected against scour and erosion with rip rap, sand bags, etc.
- Dewatering inlet pipe must be raised above ground level to minimize drawing in solids from the sump area.