

Eagle Harbor Sand & Gravel, Inc.

Eagle Harbor Mine

(MLF #80171)

Town of Barre, Orleans County, New York



Mined Land Reclamation Permit Modification

February 27, 2023

Prepared for: New York State Department of
Environmental Conservation

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APPENDIX

Full Environmental Assessment Form

IN POCKET

Mining Plan Map dated April 17, 2023

Reclamation Plan Map dated August 22, 2019

Typical Cross-Sections dated August 22, 2019

1.0 INTRODUCTION

The following Mined Land Reclamation Permit Renewal and Modification for the Eagle Harbor Sand & Gravel, Inc. ("Eagle Harbor") Eagle Harbor Mine (Mined Land File #80171) is submitted as required by the New York State Mined Land Reclamation Law and rules and regulations promulgated thereunder.

The mine is located along the western side of Eagle Harbor road approximately six (6) miles southwest of the Village of Albion as shown on **Figure 1** on the following page.

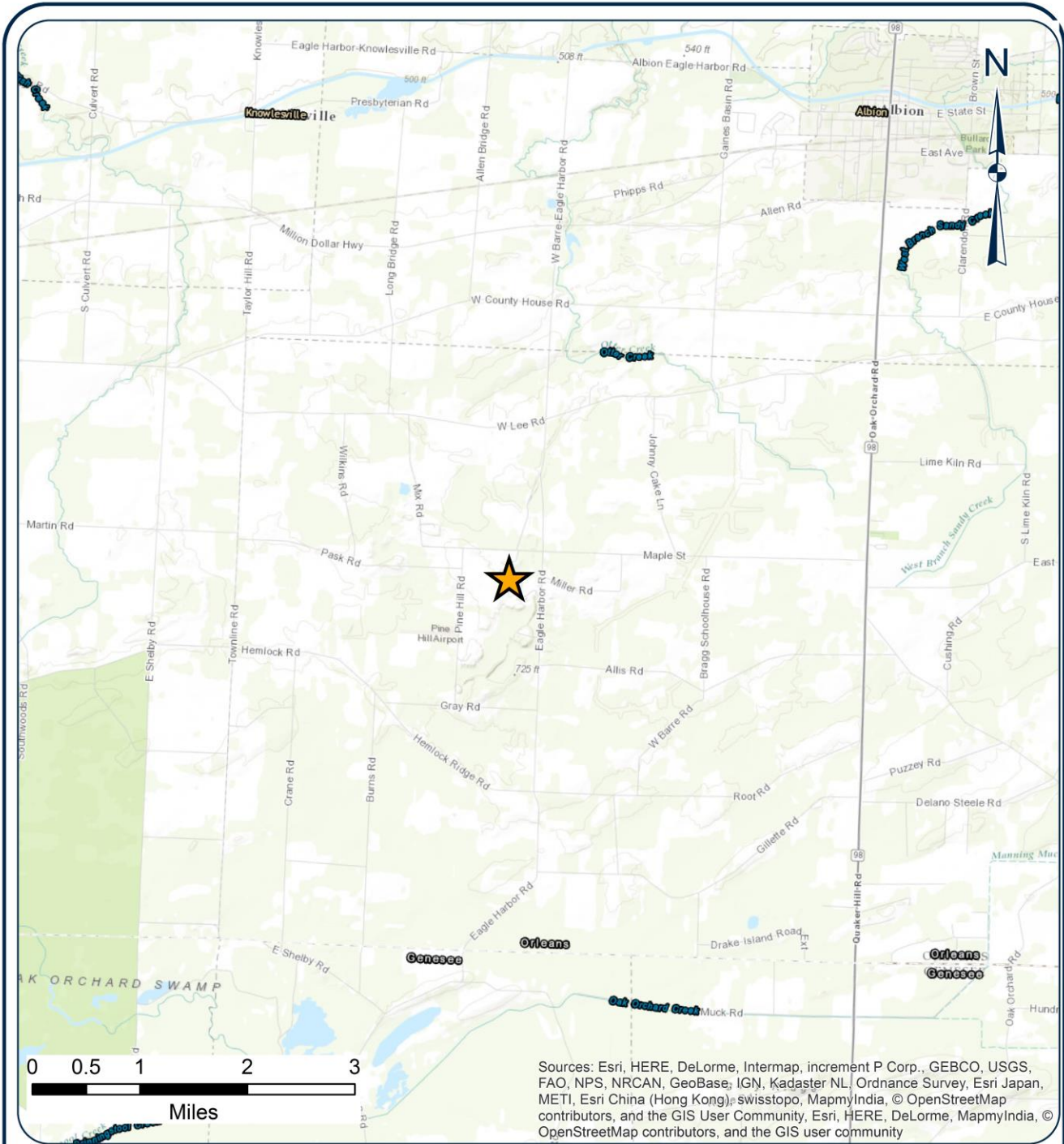
Eagle Harbor proposes to modify their Mined Land Reclamation Permit to allow for surface consolidated mining of dolostone bedrock within the previously approved Life of Mine area. Specifically, this modification proposal consists of the following:

1. Excavation of consolidated bedrock material in a 100-acre area within the existing 250.6-acre life of mine;
2. Increasing the permitted depth of excavation and
3. Using a portable crushing plant to crush the dolostone prior to feeding into the existing processing plant.

No other changes are proposed.

A Full Environmental Assessment Form is included in the Appendix of this report. An updated Mining Plan Map, Reclamation Plan Map and Typical Cross-Sections are included in the pocket. The Hydrogeologic Assessment, Noise Impact Analysis, Blasting Impact Analysis and Wetland Delineation Report are included as Appendices in the Draft Environmental Impact Statement (DEIS).

The property wholly containing the mine, plant, and office areas is leased from A.L. Bennett & Sons.



LOCATION MAP
Eagle Harbor Mine
Eagle Harbor Sand & Gravel, Inc.
Town of Barre, Orleans County, NY

strategic mining solutions
 prospecting • planning • permitting • problem solving

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Figure 1. Location Map

2.0 PROPOSED PROJECT

2.1 APPLICANT

The applicant, Eagle Harbor Sand & Gravel, Inc. is a local, privately held company providing construction materials to Orleans County and surrounding counties.

2.2 PROJECT NEED

Construction materials such as crushed stone and sand and gravel, are a necessity of modern life. These materials are used on a daily basis in every walk of life across the United States in roads, bridges, buildings, drainage courses and slope stabilization, landfills, construction projects, homes and commercial and residential developments. Construction materials make it possible to have safe roads and bridges, homes and comfortable offices, hospitals and stores. Each year approximately 10,306 pounds of crushed stone and sand and gravel are produced for each person in New York State¹.

The Center for Governmental Research, Inc. (CGR) document entitled “The Economic Impact of the New York State Mining and Construction Materials Industry, October 2011” prepared for the New York State Geological Survey/New York State Museum states that the majority of mining in New York is for construction materials used to build and maintain the state's infrastructure. The mined commodities, in addition to the hot mixed asphalt, ready mix concrete and cement industries, were responsible for generating \$1.2 to \$1.3 billion in wages and 28,000 to 30,000 jobs in New York State. CGR estimates the mining and construction materials industry contributes about \$100 million in public sector revenues (sales tax, personal income tax, motor fuel tax, corporate franchise tax and Mined Land Reclamation Law fees).²

The Eagle Harbor mine is a NYSDOT approved (4-49F) source of fine aggregate (sand). This mine has supplied these valuable, high quality aggregates to the area for decades. Local sources of high-quality aggregates reduce the need to haul aggregates long distances to

¹ Source: United States Geologic Survey and U.S. Census Bureau

² Source: NYSDEC 2015 New York State Oil, Gas and Mineral Resources Annual Report

supply market demand, thereby reducing fuel consumption and associated air emissions, traffic congestion and unnecessary wear and tear on the roadway infrastructure.

2.3 PROPOSED OPERATION

Eagle Harbor proposes to update their Mined Land Reclamation Permit to allow for consolidated excavation of dolostone bedrock within the previously approved Life of Mine area. Specifically, this modification proposal consists of the following:

1. Adding consolidated bedrock excavation within a 99.7-acre area

Standard drilling and blasting techniques will be used to excavate the rock within a 99.7-acre consolidated excavation area.

2. Increasing the permitted depth of excavation

The bedrock to be mined is overlain by sand that averages about 35-40 feet in thickness within the proposed bedrock excavation area. The depth of excavation will be increased to remove the sand to access and mine the full thickness of the dolostone bedrock. The overall depth of excavation (sand and bedrock) will be approximately 80-100 feet.

3. Using a portable crushing plant to crush the rock

A portable crusher will be added to crush the rock prior to feeding it into the existing processing plant for sizing. The portable plant will be set up at the location shown on the Mining Plan Map. No changes to the existing processing plant will occur as part of this modification.

New equipment to be added for consolidated excavation includes the rock drill and portable crusher. The existing mobile equipment (loaders, haul trucks and an excavator) will continue to be used to mine sand and gravel as well as stone.

No other changes are proposed.

3.0 MINING PLAN

3.1 EXISTING OPERATION

The Eagle Harbor Mine is an existing sand and gravel mine located on a 300+/- acre parcel leased from A.L. Bennett & Sons. Approximately 85.5 acres of land are currently affected by mining activities within a 250.6-acre Life of Mine area.

3.2 WATER RESOURCES

The water resources within and around the Eagle Harbor Life of Mine area include surface features such as streams, ponds and wetlands and groundwater resources. These surficial and groundwater resources were studied by Alpha Geoscience and their detailed findings are included in the Composite Hydrogeologic Assessment and Executive Summary, included as Appendix 5 of the DEIS.

3.2.1 Surface Water

The surface water at the site is locally perched, or semi-perched, and typified by shallow ponds and wetlands. The existing on-site surface water features Map generally drain from south to north and are shown on the Mining Plan Map, included in the Appendix.

3.2.1.1 Ponds

The Eagle Harbor site contains numerous wash water and settling ponds as well as other man-made ponds created from historic excavation activities.

3.2.1.2 Streams

Surface water currently leaves the Eagle Harbor property via a culvert beneath Maple Street identified as Outfall 001 on the Mining Plan Map. The Maple Street culvert drains into an unnamed stream on the north side of Maple Street. This stream leads northwest to a culvert beneath Kams Road then ultimately enters Otter Creek approximately 1.1 miles north of the site.

3.2.1.3 Wetlands

There are no potential Federal jurisdictional wetlands within the modification area. There are potential Federal jurisdictional wetlands located to the southeast and northeast of the quarry area, outside the proposal area. There are no NYSDEC regulated wetlands within the modification area or the project property.

The southeast wetlands were delineated in August 2018 by North Country Ecological Services to determine their proximity to the proposed expansion area. The Wetland Delineation Report is included as Appendix 8 of the DEIS.

3.2.2 Groundwater

There are two water yielding aquifers at the Eagle Harbor site: The water table aquifer, or surficial aquifer, which occurs within the unconsolidated sand and gravel deposits. And the bedrock aquifer, with the primary water-bearing fractures occurring in the dolostones. Seasonal water level data has been collected within and adjacent to the Eagle Harbor site from monitoring wells and staff gauges since 2016 to assess the relationship between the surficial aquifer and the bedrock aquifer, determine ground water flow patterns, and evaluate the potential impact of the proposed quarry on nearby residential wells and wetlands.

Data collected by Eagle Harbor and Alpha include water levels from six bedrock monitoring wells (MW-1 through MW-4, PW-1, and PW-1A), two residential bedrock aquifer wells (Miller and Barn Well), five surficial aquifer monitoring wells (MW-1S through MW-5S), five staff gauges (SG-1, SG-2, SG-3, PG-1, WP-1), and two culverts (Maple Street outflow from the site (Outfall 001) and the next culvert downstream at Kams Road). The Barn Well is no longer in use, and there is no pump in the well. The Miller well is no longer relied upon for potable water because the residence has been hooked up to the public water supply line along Maple Street. Additionally, water level data for a USGS surficial aquifer monitoring well (OL-20) was obtained from the USGS website for the same dates as the site water level measurement dates.

The water level data indicates that the depth to water in the surficial aquifer varies from several feet to over 30 ft at the site and shows seasonal fluctuations of several feet. The lower bedrock aquifer receives most of its recharge from the overlying sand and gravel aquifer where it is in contact with the bedrock. Discontinuous or patchy silty/clayey layers occur in some areas of the overlying sand and gravel aquifer and can limit, or retard recharge and result in a confined, or semi-confined bedrock aquifer.

3.3 BEDROCK

The bedrock in the modification area are dolostones of the Goat Island and Gasport Members of the Lockport Formation and the Decew Dolostone. The dolostones are underlain by the Rochester Shale, which is not proposed to be mined. The total thickness of dolostone at the Eagle Harbor site is approximately 58 feet.

The top of the Rochester Shale/future floor of the expansion area was determined to be sloping gently south-southeasterly using boring and core hole exploration information.

3.4 SOILS

The majority of the soils within the modification area have been disturbed through historic mining activities and much of the previously mined areas have subsequently been reclaimed using topsoil saved from stripping activities.

The USDA Soil Survey of Orleans County mapped the original soils in the modification area as HoB - Howard Gravelly Loam, HpC - Howard Soils, BoB - Bombay Fine Sandy Loam, and CoC - Colonie Loamy Fine Sand.

The Howard series consists of deep, gently sloping to hilly, well drained to somewhat excessively drained soils on outwash terraces, glacial beaches, kettles, and kames. These soils formed in glacial outwash derived mainly from sandstone, limestone and shale.

The Bombay series consists of deep, nearly level to gently sloping, moderately well drained soils on glacial till plains. These soils formed in glacial till derived from sandstone and limestone.

The Colonie series consists of deep, nearly level to rolling, well drained soils on beaches and sand bars or deltaic positions associated with glacial lake deposits. These soils formed in water-laid or wind-deposited fine or very fine sand.

3.5 TYPE OF MINE AND MINING METHOD

3.5.1 Type of Mine

The Eagle Harbor Mine is an active 250+/- acre sand and gravel mine located within a 300+/- acre parcel. Mining operations on the property commenced prior to 1982 and have continued without interruption and as approved by DEC MLRL permit and Town special permit at this location since that time. The 99.7-acre quarry modification area will be operated as a surface consolidated mine within the previously permitted sand and gravel Life of Mine area.

3.5.2 Mining Method

The sand overlying the rock will be mined prior to consolidated excavation. Sand will be mined using the same techniques and equipment currently used for sand and gravel excavation. Within the proposed bedrock excavation area, the gradation of the sand varies and, depending on the quality, the sand will either be sold, used for berm

construction or concurrent reclamation of the area. Additional information regarding concurrent reclamation is included in Section 5.0.

Standard drilling and blasting techniques will be used to excavate the rock within a 99.7-acre consolidated bedrock excavation area. Once the rock surface is cleared, blast holes will be drilled in regular patterns in the rock, loaded with explosives in accordance with standards practices in the blasting industry and the explosives detonated. The shot rock will then be loaded by front-end loader, or equivalent, into trucks on the mine floor and hauled to the portable processing plant for crushing. The crushed stone will be then transported to the existing processing plant for sizing. After processing, sized material will be loaded by front-end loader or equivalent into trucks for sale and transportation off-site.

3.5.2.1 Soil Stripping

Soil will continue to be stripped back from the advancing faces by bulldozer or equivalent and stockpiled in perimeter berms, as shown on the Mining Plan Map, or in piles within the Life of Mine area. The uppermost six inches of soil encountered will be retained on-site for use in reclamation.

Stripping operations are a relatively minor part of the overall operation which typically occurs in the off-season for approximately one month per year to clear the area needed for the upcoming season's operation.

3.5.2.2 Drilling and Blasting

Blasting will be conducted by expert licensed blasters using established industry methods and following all safety precautions required by the U.S. Department of Labor, Mine Safety and Health Administration.

The Applicant anticipates blasting will be required approximately 2 to 3 times per month during the construction season. All blasts will be monitored by a properly calibrated seismograph. Seismographs will either be installed at the nearest residential receptor giving permission or on the mine property adjacent to the nearest resident and in-line with the blast location. Additional seismographs will be set up as directed by the Department. The permittee will maintain copies of all blasting records. Such records shall be made available to the Department upon request.

Blasting will be done between 10 a.m. and 5 p.m. Monday through Friday. Blasting will not occur on weekends, New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving and Christmas Day.

Additional information regarding blasting is included in the Blasting Impact Assessment, included as Appendix 10 in the DEIS.

3.5.2.3 Face Loadout and Hauling

Shot rock will be loaded by a front-end loader or equivalent into waiting trucks that will haul the stone to the portable processing plant. Occasionally, shot rock (e.g. for slope stabilization) may be loaded directly into on-road trucks and hauled from the site. The portable processing plant will be located on the east side of the proposed quarry area as shown on the Mining Plan Map. The crushed stone will be hauled to the existing fixed plant for sizing, stockpiling and sales. No changes to the existing fixed plant are proposed.

3.5.3 Setbacks

Mining within the existing sand and gravel mine and modification area will continue to the limits and depths indicated on the Reclamation Plan Map and Typical Sections. Minimum setbacks of 25 feet will be maintained from all external property boundaries in the modification area. The toes of all intermediate and final rock faces in the modification area will be at least 25 feet plus 1.25 times the face height from all property boundaries, as shown on the Reclamation Plan Map and Typical Sections in the Appendix.

3.5.4 Soil Storage Areas and Berms

Soil will be removed in advance of the mine faces and stored in perimeter berms along the edges of the life of mine area, as shown on the Mining Plan Map, or in temporary piles on the mine floor.

The toes of all berms or temporary piles will remain at least 25 feet from all property boundaries. Piles/berms that remain at the time of reclamation will be vegetated to grasses and legumes as described in Section 5.2.

The uppermost six inches of soil encountered will be retained on-site for use in reclamation. Sufficient soil from the upper six inches of soil will be saved to cover the mine floor and slopes to be planted to grasses and legumes to a minimum depth of six inches, as required by the NYSDEC regulations, Section 422.4.

3.5.5 Processing

A portable crushing plant will be located in the eastern portion of the modification area to crush stone as shown on the Mining Plan Map. Crushed stone will be hauled to the existing fixed plant for sizing, stockpiling and sales.

The existing fixed processing plant in the eastern part of the mine will continue to be used for sizing sand and gravel and stone. The processing plant washes and sizes aggregate into salable products that are stored in stockpiles by the plant and around the perimeter of the plant. A front-end loader loads processed material into on-road trucks that haul the material off-site. When there are no trucks to be loaded, the loader moves the processed material to stockpiles along the perimeter of the plant area. The location of the existing main processing plant and stockpile area is shown on the Mining Plan Map in the Appendix.

No change in processing plant capacity or the hours of operation is proposed. All trucks will continue to enter and leave the site through the existing entrance on County Route 5/Eagle Harbor Road.

3.5.6 Lift Configuration

It is anticipated that the consolidated bedrock will be worked in two 25- to 30-foot-tall lifts within the modification area.

3.5.7 Direction of Mining

Excavation will commence in the southeast corner and proceed in a westerly and northwesterly direction. Based on geologic mapping, the Rochester Shale is lowest in the southeast corner and that is where the sump will be established. The proposed direction and sequence of mining activities in the modification area are indicated by arrows on the Mining Plan Map.

4.0 METHODS FOR PREVENTING ENVIRONMENTAL IMPACT, POLLUTION AND SOIL EROSION

4.1 DRAINAGE AND SOIL EROSION

Drainage within the consolidated bedrock excavation area will be internal. Water will enter the consolidated bedrock excavation area through one of three ways:

1. Direct precipitation,
2. Runoff coming over the active faces and
3. Ground water seeping in.

Water will be collected in sumps in the southeast corner of the quarry floor where it will be pumped out into a system of swales and ultimately discharged off-site.

The Hydrogeologic Analysis, included as Appendix 5 of the DEIS, conservatively determined that at full buildout the pumping system will have the capacity to pump 700 gpm from the sump to keep the quarry floor dry. These volumes are based on the worst-case scenario of the quarry operating during full-buildout conditions which will only exist during the final stage of mining prior to final reclamation.

4.1.1 Surface Water Quality

Water will be collected in sumps in the southeast corner of the quarry floor where it will be pumped out into a system of swales and sediment basins and discharged off-site in accordance with the NYSDEC Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity. All water discharged will comply with NYSDEC standards for purity and quality.

4.1.2 Surface Water Quantity

Pumpout water will ultimately be discharged off-site to the north into the existing drainage network. Utilizing HydroCAD, the Hydrogeologic Analysis assessed the potential impact that this proposed mine discharge could have on downstream flooding during various precipitation events. Using the worst-case pumping rates associated with the full buildout scenario (700 gpm) the model assessed whether the pumping rate of the quarry would cause water flows to exceed the flow capacity of the unnamed creek and the downstream culverts during future storm events.

The results of the HydroCAD model indicated that for a 5-yr return storm event, the additional flow through Outfall 001 (the culvert on Maple Street) created by the 700 gpm (1.56 cfs) quarry discharge represents less than 10% of the total flow to the culvert. For

larger storms with greater precipitation, the quarry discharge represents an even smaller percentage of the flow directed to the culvert. This relationship continues downstream with the quarry discharge making up a smaller and smaller percentage of the flow through successive culverts.

4.2 GROUNDWATER

4.2.1 Wells

About a dozen residences are located on both sides of Pine Hill Rd, west of the site; two are located to the north along Maple Street; and one is located to the east (Miller Road). The closest residence southeast of the expansion area is over 1800 ft away and along Eagle Harbor Road. The residence south of the expansion area is over 4000 ft from the Life of Mine boundary.

The lateral extent of drawdown of the aquifer at full buildout is predicted to be greatest to the west of the quarry where drawdown impacts extend as far as 1950 feet in the surficial aquifer and 1900 feet in the bedrock aquifer³. Drawdown at the quarry edge would range from approximately 20 to 35 feet and decrease outward to less than a foot at maximum lateral extent.

The Town of Barre has installed municipal water supply lines on Maple Street (north of the site), Pine Hill Road (west of the site) and Kams Road (north-northeast of the site). All of the residences within the predicted water table drawdown area, except for the residence at 4764 Pine Hill Road, are now on municipal water.

4.2.2 Wetlands

The quarry is not anticipated to impact the southeastern wetland (KN-9) or the northern wetlands (KN-12 & KN-13) due to their distance from the quarry edge (KN-12 is over 2500 feet away from the quarry) or the underlying silt layers that cause them to be semi-perched above the water table as occurs at KN-9 & KN-13. All of these wetlands typically

³ Composite Hydrogeologic Assessment and Executive Summary, included as Appendix 5 of the DEIS.

experience seasonal draw down based on precipitation rates, temperature, evapotranspiration and other factors. The southeastern wetland was dry in September, for example, when North Country delineated its northern boundary. No physical disturbance of these wetlands will occur. A thorough assessment of the potential for impacts to wetlands is included in the Composite Hydrogeologic Assessment and Executive Summary, included as Appendix 5 of the DEIS.

4.3 LAND USE

The entire modification area lies within the currently permitted Eagle harbor Sand and Gravel mine. No change from the current use as 'mining', only a change in method of mining, will occur as a result of this modification.

4.4 DUST

The following methods will be used to control dust from consolidated mining activities:

- ✘ Soil overburden and the underlying sand will be removed from the rock prior to blasting.
- ✘ Soil overburden is typically stripped during the early winter and spring when soil conditions are not conducive for the generation of large amounts of dust.
- ✘ The consolidated extraction area will be surrounded by perimeter faces and berms. Since the most activity at a mine occurs at the bottom of the faces, the overlying benches and berms help screen the activity from the wind, reducing the wind velocity and reducing the potential for dust generation. The overlying benches and berms also help contain any fugitive dust to the site.
- ✘ Haul roads within the affected area will be periodically sprayed with water to keep the amount of dust generated by hauling to a minimum.
- ✘ Vehicle speed on haul roads is controlled.
- ✘ The stone has a natural moisture content that helps bind finer grained particles together and minimize the generation of dust.
- ✘ Drills equipped with dust control equipment including a shroud around the ground/drill hole interface and dust collectors will be used.
- ✘ All blasting will be conducted and supervised by a certified blaster, ensuring the proper blast design and drilling pattern.
- ✘ Dust generated by the processing of rock will be controlled by fog nozzles located at critical points within the processing circuit (such as crusher discharge points and conveyor head pulleys).

- ✘ The stockpiled product retains dust control moisture from processing. In addition, the stockpile area will be routinely sprayed down with water when needed to control fugitive dust.
- ✘ EHS&G will maintain the paved entrance from County Route 5/Eagle Harbor Road to the scale to mitigate trackage and dust from vehicle movement.
- ✘ EHS&G will post signs to notify truck drivers of tarp laws to mitigate potential material spillage and dust from uncovered loads.
- ✘ The paved entrance is swept as often as necessary to control fugitive dust and trackage off-site.
- ✘ On road trucks will be restricted to the stockpile area and will not co-mingle with or use the haul roads of the off-road haul trucks to minimize trackage.
- ✘ A water truck equipped with spray nozzles will continue to wet down internal haul roads in regular use and site access roads as needed to control fugitive dust.
- ✘ In addition, all conditions in the existing Mined Land Reclamation Permit and Mined Land-Use Plan pertaining to dust suppression will continue to be followed.

4.5 TRAFFIC

There are limited permitted sand and gravel reserves left on-site and Eagle Harbor Sand & Gravel anticipates that the modification area sand and crushed stone sales will replace the existing sand and gravel sales. They anticipate continued sales of approximately 120,000 to 140,000 tons of construction aggregate per year. That works to approximately 128 21-ton standard dump truck loads/week on average which will not impact the level of service on County Route 5/Eagle Harbor Road.

The theoretical maximum number of trucks that could exit the mine site is 24 trucks/hour based on physical limitations with loadout and the scalehouse. Actual truck traffic will be closer to 5 trucks/hour based on past construction season sales.

No change to the current access road is proposed and trucks will continue to use the current access road to Eagle Harbor Sand & Gravel.

4.6 NOISE

A Noise Impact Assessment (NIA) was performed following New York State Department of Environmental Conservation's Program Policy: Assessing and Mitigating Noise Impacts and determined that no significant noise level increase from mining activities will occur as a result of this modification proposal. A copy of the NIA is included as Appendix 9 of the Draft Environmental Impact Statement.

The NIA compared the projected mining related sound levels determined/limited by the current mining permit and the proposed conditions using worst case scenarios. The following table summarizes the finding of the NIA:

Comparison of Sound Levels at Receptor Locations					
	R1	R2	R3	R4	R5
Total Current Potential Sound Level of Operation at Receptor	53.7 dB(A)	68.7 dB(A)	55.2 dB(A)	58.3 dB(A)	58.1 dB(A)
Total Potential Sound Level of Operation at Receptor Under Proposed Scenario	56.0 dB(A)	58.3 dB(A)	55.2 dB(A)	58.5 dB(A)	48.6 dB(A)
Projected Increase Over Current Conditions	+2.7 dB(A)	-9.4 dB(A)	0 dB(A)	+0.2 dB(A)	-9.5 dB(A)

Table 1. Noise Impact Assessment Summary

Noise from consolidated mining will be less or insignificant than current potential sound levels at all surrounding receptors for the following reasons:

- ✘ The proposed consolidated mining operations will occur much further away from nearby residences than the currently approved sand and gravel mining operations.
- ✘ No change to existing use of the site as a mine is proposed since the 99.7-acre modification area is entirely within areas already approved for unconsolidated mining.
- ✘ The increased depth of excavation will, in effect, create taller barriers out of the mine faces and berms thereby enhancing their noise mitigation abilities above and beyond current levels.

In addition, Eagle Harbor will construct a perimeter berm around the bedrock excavation area. The extent of the berm and its location are shown on the Mining Plan Map and will provide additional noise mitigation that was not factored into the NIA.

4.7 GROUND VIBRATION AND AIR OVERPRESSURE

Blasting is a well understood science that is done safely by licensed blasters thousands of times each year in just New York State. Eagle Harbor will control blasting so that the peak particle velocity of the ground vibrations satisfy the variable particle velocity versus frequency limits recommended by the United States Bureau of Mines (USBM) Report of Investigations (RI) 8507 (Siskind, 1980b). The USBM recommends that the ground peak particle velocities for blasts with frequencies below 40 Hertz remain at or below 0.50 inches per second. For higher frequency blasts, those at or above 40 Hertz, the USBM recommends peak particle velocities at or below 2 inches per second.

Vibration monitoring is accomplished through properly calibrated seismograph measurements and air overpressure measurements made at the nearest residential structure or a comparable location, such as the property boundary. The vibration records aid in shot evaluation and design. Seismograph records will be maintained by Eagle Harbor and provided to the Department upon request.

The USBM published in 1980 (RI 8485) recommended residential structure guidelines for airblast or air vibrations caused by blasting. The USBM recommends that the air blast not exceed 133 dB at the nearest residential structure when measured with a 2 Hertz high pass measuring system, the most common commercial system (Siskind, 1980a). The USBM ground vibration and airblast guidelines were designed to prevent damage to residential structures in the vicinity of mines and will be met by controlling the blast size and design.

The USBM also published in 1984 (RI 8896) recommended guidelines for ground vibration near pressurized transmission pipelines (water and gas), vertical wells and telephone poles. The USBM determined that while pressurized transmission lines will maintain their integrity at peak particle velocities over 600 mm/s (23.6 inches/sec) they recommended that 125 mm/sec (4.92 inches/sec) is a safe-level criterion for large surface mine blasts for Grade B or better steel pipelines. The same criterion is recommended for SDR 26 or better PVS pipe, vertical wells and telephone poles.

Pre-blast surveys will be conducted prior to any blasting activity and provided to NYSDEC. Request letters will be sent certified mail with return receipt to all property owners with structures within 1000 feet of the quarry. Copies of all correspondence, including certified mail receipts, as well as acceptance and denial of access notifications will be sent to NYSDEC prior to any blasting activity.

A Blasting Impact Assessment that fully investigates the potential for impacts associated with blasting and includes a copy of the pre-blast request letter template that will be used, is included as Appendix 10 of the DEIS.

4.8 VISUAL

The potential for visual impacts will not increase as a result of this modification for the following reasons:

- ✘ No change to existing use of the site as a mine is proposed since the 99.7-acre consolidated bedrock mining area is entirely within areas already approved for unconsolidated mining.
- ✘ The proposed consolidated mining operations occur much further away from nearby residences than is already approved under the existing permit.
- ✘ A perimeter berm is proposed to be constructed around the consolidated bedrock excavation boundary. This proposed berm, which is currently not required for the unconsolidated mining in the same area, will mitigate any potential for noise, visual and dust impacts from mining activities.
- ✘ The increased depth of excavation will, in effect, create taller barriers out of the mine faces and berms thereby enhancing their visual mitigation abilities above and beyond current levels.

5.0 RECLAMATION PLAN

5.1 RECLAMATION PLANS AND OBJECTIVE

A total of 99.7 acres will be affected by consolidated mining operations within the existing life of mine. This area will be reclaimed as a pond and the slope around the perimeter of consolidated bedrock excavation area will be stabilized and planted with grasses.

5.2 FINAL CONFIGURATION AND REVEGETATION

After consolidated bedrock excavation is complete, the excavation area will be reclaimed as a 107+/- acre pond. The final water elevation and overall size of the pond will fluctuate several feet over the course of the year in response to changes to the water table but will have an average water elevation of around 664.5' AMSL.

Once the pumps are turned off, the floor of the quarry will flood and the water level in the quarry will rise over time. As the water level rises in the quarry, the rate of water level rise will decrease, leaving the upper sand stripping slope exposed for an extended period of time. To address this, as part of the pre-final reclamation all exposed unconsolidated surfaces, including the stripping slope down to the bedrock surface will be:

1. Graded to a stable slope,
2. Have topsoil replaced and
3. Be seeded and mulched per the specifications below.

The mine faces will be stabilized by pre-splitting, controlled blasting, scaling or equivalent as each section of the quarry reaches final grade. The final slopes of the sand and gravel above the bedrock will be graded to a slope no steeper than one vertical on two horizontal and the final quarry faces will be vertical. Shoaling areas will be created over portions of the quarry and sand and gravel faces using excess unsaleable fines, sand and silt. Within five feet of the ponds edge the shoaling areas will be graded to a slope no steeper than approximately one vertical on three horizontal five feet to allow ingress and egress from the water. The below water shoaling areas will be graded to no steeper than one vertical on three horizontal to a depth of six feet and to no steeper than one vertical on two horizontal below that. In addition, an access ramp to the quarry floor will remain as part of final reclamation to allow for water access as the quarry fills with water.

The approximate extent of the shoaling area is shown on the Reclamation Plan Map and Typical Cross-Sections included in the Appendix.

The uppermost six inches of cover materials used for above-water reclamation will be soil capable of supporting and sustaining vegetation.

Revegetation of the unconsolidated sand and gravel excavation area will continue to be agricultural fields using farm crops including corn, wheat and alfalfa.

Grass seed for revegetation of the consolidated excavation slope area will consist of commercial grades of⁴:

Switchgrass @ 4 lbs/acre
Big Bluestem @ 4 lbs/acre
Little Bluestem @ 2 lbs/acre
Indiangrass @ 1.5 lbs/acre
Total: 11.5 lbs./acre

Small grain straw mulch will be applied at 1.5 tons/acre. The soils will be tested for pH and fertility at the time of reclamation and limed to achieve a pH of 5.5 or higher.

Eagle Harbor may substitute an equivalent seeding mixture and application rate recommended by the local U.S. Department of Agriculture Soil and Conservation Service if they so desire.

5.2.1 Haulageways

All haul roads within the mining area, except those designated as part of the permanent access to the site, will ultimately be reclaimed with the rest of the mine.

5.2.2 Removal of Equipment and Disposal of Stockpiles and Waste

All mining equipment, processing equipment, and personal property will be removed from the site prior to completion of final site reclamation.

⁴ Warm season grass seed mixture recommendation from NYSDEC's New York State Revegetation Procedures Manual.

No permanent stockpiles are to remain on the mine floor. All spoil or unused material stockpiles will either be removed from the permit area or utilized during reclamation of the affected land.

Off-site disposal of refuse during reclamation shall be governed by the Part 360 regulations.

5.3 DRAINAGE

All drainage within the consolidated bedrock excavation area will ultimately be directed internally toward the pond as shown on the Reclamation Plan Map.

APPENDIX

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either “Yes” or “No”. If the answer to the initial question is “Yes”, complete the sub-questions that follow. If the answer to the initial question is “No”, proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project:		
Project Location (describe, and attach a general location map):		
Brief Description of Proposed Action (include purpose or need):		
Name of Applicant/Sponsor:		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:
Project Contact (if not same as sponsor; give name and title/role):		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. (“Funding” includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees <input type="checkbox"/> Yes <input type="checkbox"/> No		
b. City, Town or Village Planning Board or Commission <input type="checkbox"/> Yes <input type="checkbox"/> No		
c. City Council, Town or Village Zoning Board of Appeals <input type="checkbox"/> Yes <input type="checkbox"/> No		
d. Other local agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
e. County agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
f. Regional agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
g. State agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
h. Federal agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
i. Coastal Resources. <ul style="list-style-type: none"> <li data-bbox="121 829 1485 861">i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? <input type="checkbox"/> Yes <input type="checkbox"/> No <li data-bbox="121 892 1485 924">ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? <input type="checkbox"/> Yes <input type="checkbox"/> No <li data-bbox="121 924 1485 955">iii. Is the project site within a Coastal Erosion Hazard Area? <input type="checkbox"/> Yes <input type="checkbox"/> No 		

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? Yes No

- **If Yes**, complete sections C, F and G.
- **If No**, proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? Yes No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? Yes No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) Yes No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? Yes No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. Yes No
If Yes, what is the zoning classification(s) including any applicable overlay district?

b. Is the use permitted or allowed by a special or conditional use permit? Yes No

c. Is a zoning change requested as part of the proposed action? Yes No

If Yes,

i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? _____

b. What police or other public protection forces serve the project site?

c. Which fire protection and emergency medical services serve the project site?

d. What parks serve the project site?

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?

b. a. Total acreage of the site of the proposed action? _____ acres
b. Total acreage to be physically disturbed? _____ acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

c. Is the proposed action an expansion of an existing project or use? Yes No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? Yes No

If Yes,

i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? Yes No

iii. Number of lots proposed? _____

iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? Yes No

i. If No, anticipated period of construction: _____ months

ii. If Yes:

- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year

• Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? Yes No
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	_____
At completion	_____	_____	_____	_____
of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? Yes No
 If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____ height; _____ width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? Yes No
 If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: Ground water Surface water streams Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? Yes No
 (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
 If Yes:

i. What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____

iv. Will there be onsite dewatering or processing of excavated materials? Yes No
 If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? Yes No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? Yes No
 If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will proposed action cause or result in disturbance to bottom sediments? Yes No

If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? Yes No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? Yes No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? Yes No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No
- Do existing lines serve the project site? Yes No

iii. Will line extension within an existing district be necessary to supply the project? Yes No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? Yes No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? Yes No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? Yes No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No

• Do existing sewer lines serve the project site? Yes No
 • Will line extension within an existing district be necessary to serve the project? Yes No
 If Yes:
 • Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? Yes No
 If Yes:
 • Applicant/sponsor for new district: _____
 • Date application submitted or anticipated: _____
 • What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? Yes No
 If Yes:
 i. How much impervious surface will the project create in relation to total size of project parcel?
 _____ Square feet or _____ acres (impervious surface)
 _____ Square feet or _____ acres (parcel size)
 ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

• If to surface waters, identify receiving water bodies or wetlands: _____

• Will stormwater runoff flow to adjacent properties? Yes No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? Yes No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? Yes No
 If Yes, identify:
 i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

 ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

 iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? Yes No
 If Yes:
 i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) Yes No
 ii. In addition to emissions as calculated in the application, the project will generate:
 • _____ Tons/year (short tons) of Carbon Dioxide (CO₂)
 • _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 • _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 • _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 • _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflouorocarbons (HFCs)
 • _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? Yes No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? Yes No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): _____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? Yes No

If Yes:

i. When is the peak traffic expected (Check all that apply): Morning Evening Weekend
 Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? Yes No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____

vi. Are public/private transportation service(s) or facilities available within 1/2 mile of the proposed site? Yes No

vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? Yes No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? Yes No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? Yes No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): _____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? Yes No

l. Hours of operation. Answer all items which apply.

<p><i>i.</i> During Construction:</p> <ul style="list-style-type: none"> • Monday - Friday: _____ • Saturday: _____ • Sunday: _____ • Holidays: _____ 	<p><i>ii.</i> During Operations:</p> <ul style="list-style-type: none"> • Monday - Friday: _____ • Saturday: _____ • Sunday: _____ • Holidays: _____
---	--

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? Yes No
 If yes:
 i. Provide details including sources, time of day and duration:

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? Yes No
 Describe: _____

n.. Will the proposed action have outdoor lighting? Yes No
 If yes:
 i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Yes No
 Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? Yes No
 If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? Yes No
 If Yes:
 i. Product(s) to be stored _____
 ii. Volume(s) _____ per unit time _____ (e.g., month, year)
 iii. Generally describe proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? Yes No
 If Yes:
 i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? Yes No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? Yes No
 If Yes:
 i. Describe any solid waste(s) to be generated during construction or operation of the facility:
 • Construction: _____ tons per _____ (unit of time)
 • Operation : _____ tons per _____ (unit of time)
 ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:
 • Construction: _____

 • Operation: _____

 iii. Proposed disposal methods/facilities for solid waste generated on-site:
 • Construction: _____

 • Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? Yes No
 If Yes:
 i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____
 ii. Anticipated rate of disposal/processing:
 • _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
 • _____ Tons/hour, if combustion or thermal treatment
 iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? Yes No
 If Yes:
 i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

 ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

 iii. Specify amount to be handled or generated _____ tons/month
 iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

 v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? Yes No
 If Yes: provide name and location of facility: _____

 If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.
 i. Check all uses that occur on, adjoining and near the project site.
 Urban Industrial Commercial Residential (suburban) Rural (non-farm)
 Forest Agriculture Aquatic Other (specify): _____
 ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertypes	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? Yes No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? Yes No
If Yes,
i. Identify Facilities:

e. Does the project site contain an existing dam? Yes No
If Yes:
i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? Yes No
If Yes:
i. Has the facility been formally closed? Yes No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? Yes No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? Yes No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: Yes No
 Yes – Spills Incidents database Provide DEC ID number(s): _____
 Yes – Environmental Site Remediation database Provide DEC ID number(s): _____
 Neither database
ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? Yes No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

v. Is the project site subject to an institutional control limiting property uses? Yes No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? Yes No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: _____ %
 _____ %
 _____ %

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: Well Drained: _____ % of site
 Moderately Well Drained: _____ % of site
 Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ % of site
 10-15%: _____ % of site
 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? Yes No
 If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? Yes No

ii. Do any wetlands or other waterbodies adjoin the project site? Yes No
 If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? Yes No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? Yes No
 If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? Yes No

j. Is the project site in the 100 year Floodplain? Yes No

k. Is the project site in the 500 year Floodplain? Yes No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? Yes No
 If Yes:
 i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____ _____ _____	
n. Does the project site contain a designated significant natural community? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> Describe the habitat/community (composition, function, and basis for designation): _____ _____ <i>ii.</i> Source(s) of description or evaluation: _____ <i>iii.</i> Extent of community/habitat: <ul style="list-style-type: none"> • Currently: _____ acres • Following completion of project as proposed: _____ acres • Gain or loss (indicate + or -): _____ acres 	
o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? <input type="checkbox"/> Yes <input type="checkbox"/> No	
p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? <input type="checkbox"/> Yes <input type="checkbox"/> No	
q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, give a brief description of how the proposed action may affect that use: _____ _____	
E.3. Designated Public Resources On or Near Project Site	
a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide county plus district name/number: _____	
b. Are agricultural lands consisting of highly productive soils present? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>i.</i> If Yes: acreage(s) on project site? _____ <i>ii.</i> Source(s) of soil rating(s): _____	
c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> Nature of the natural landmark: <input type="checkbox"/> Biological Community <input type="checkbox"/> Geological Feature <i>ii.</i> Provide brief description of landmark, including values behind designation and approximate size/extent: _____ _____ _____	
d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <i>i.</i> CEA name: _____ <i>ii.</i> Basis for designation: _____ <i>iii.</i> Designating agency and date: _____	

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes:	
<i>i.</i> Nature of historic/archaeological resource: <input type="checkbox"/> Archaeological Site <input type="checkbox"/> Historic Building or District	
<i>ii.</i> Name: _____	
<i>iii.</i> Brief description of attributes on which listing is based: _____	
f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	<input type="checkbox"/> Yes <input type="checkbox"/> No
g. Have additional archaeological or historic site(s) or resources been identified on the project site?	
If Yes:	
<i>i.</i> Describe possible resource(s): _____	
<i>ii.</i> Basis for identification: _____	
h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes:	
<i>i.</i> Identify resource: _____	
<i>ii.</i> Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____	
<i>iii.</i> Distance between project and resource: _____ miles.	
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes:	
<i>i.</i> Identify the name of the river and its designation: _____	
<i>ii.</i> Is the activity consistent with development restrictions contained in 6NYCRR Part 666?	
	<input type="checkbox"/> Yes <input type="checkbox"/> No

F. Additional Information


Attach any additional information which may be needed to clarify your project.

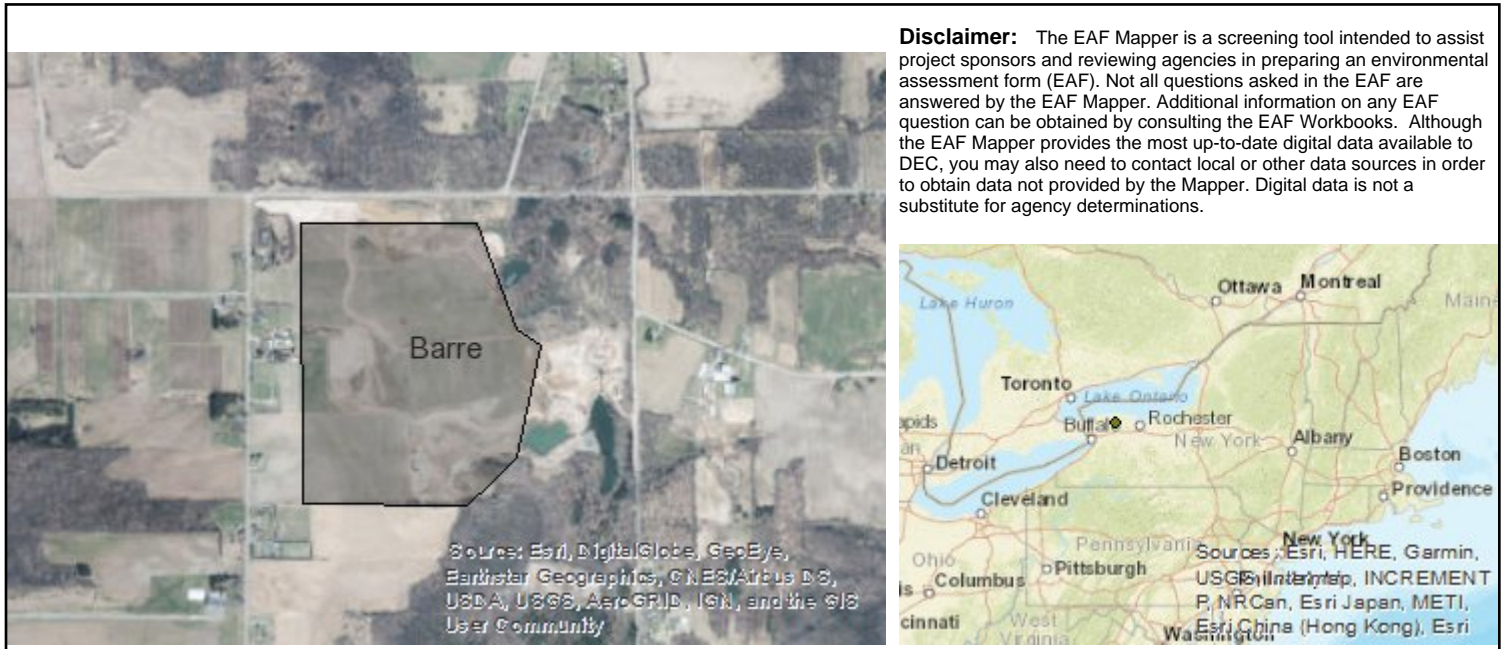
If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date 2/27/2023

Signature  Title _____

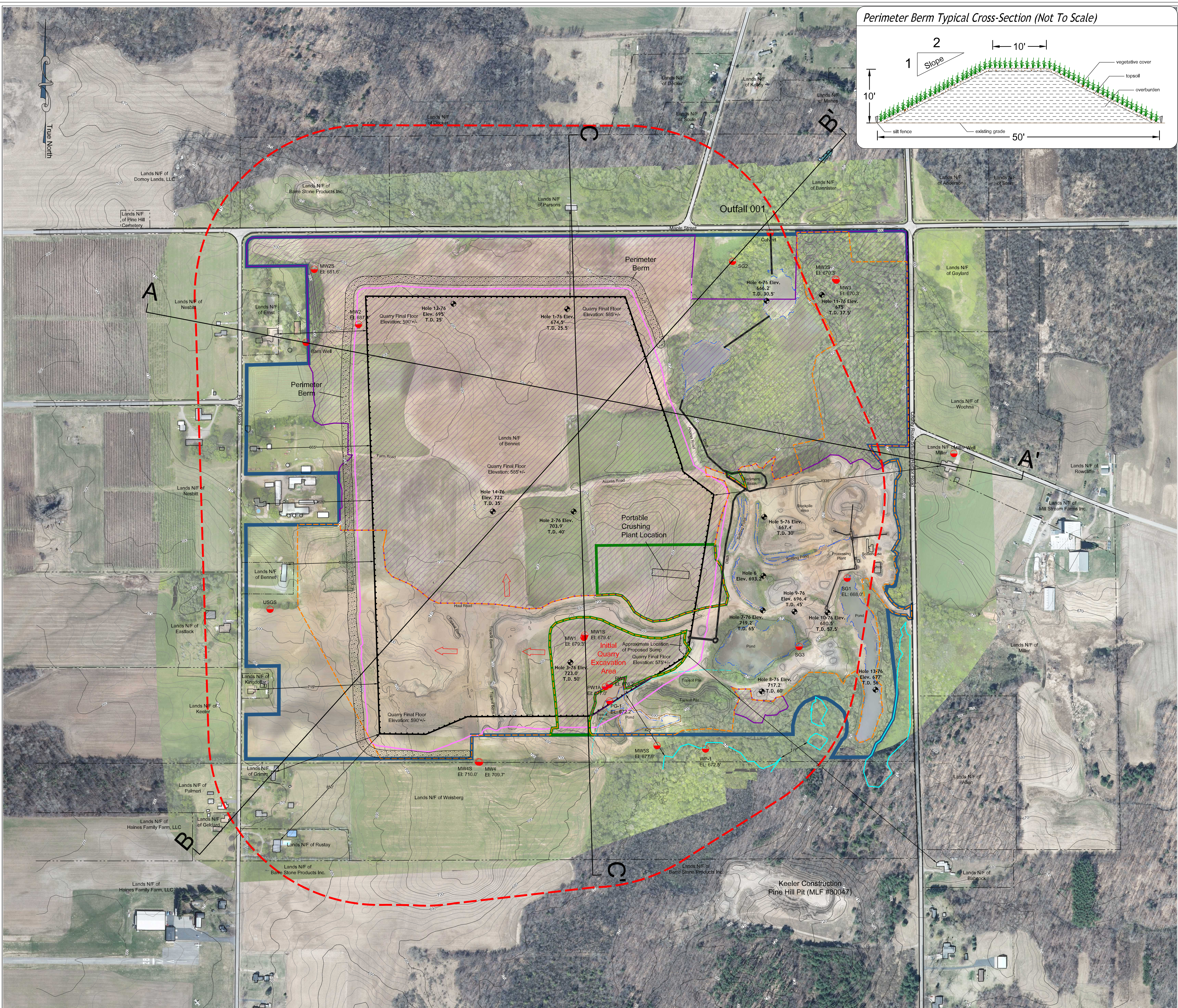
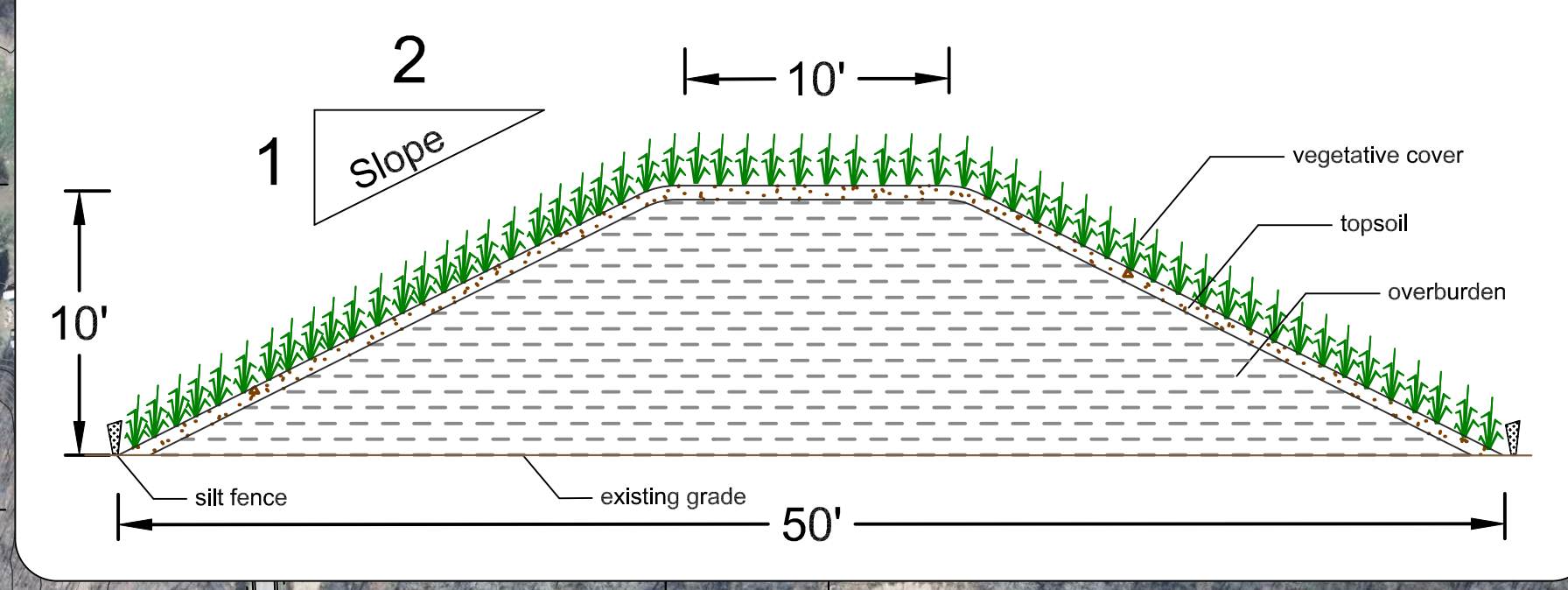


Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas: West Erie Canal Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	Yes
E.2.g [Unique Geologic Features]	Eagle Harbor Sand & Gravel quarry - Burma Woods
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.

E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	ORLEcn1
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National Register of Historic Places]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Perimeter Berm Typical Cross-Section (Not To Scale)



MINING PLAN MAP

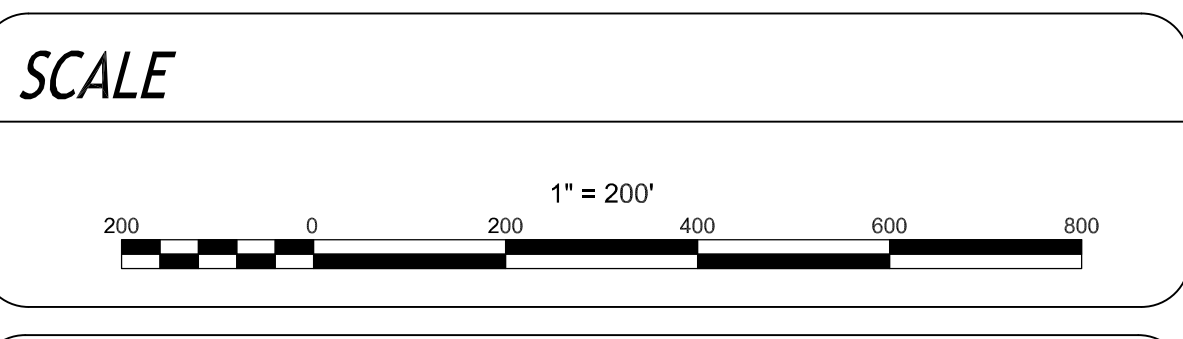
Eagle Harbor Mine
 NYSDEC Mine ID: 80171
 Eagle Harbor Sand & Gravel, Inc.
 Town of Barre, Orleans County, New York

Prepared by:
strategic mining solutions
 prospecting • planning • permitting • problem solving
 Strategic Mining Solutions LLC
 Geologists & Mining Consultants
 1149 County Highway 27
 Richfield Springs, New York 13340
 brs@miningstrategy.com

Details:
 Date: August 17, 2016
 Horizontal Scale: 1" = 200'
 Datum: Mean Sea Level
 USGS Quad: Knowlesville
 Contour Interval: 2 feet
 Drafted by: Millman

REVISIONS	Date	Description	By
	1/11/18	Update Bedrock Excavation Area	BTM
	6/5/18	Topographic Update	BTM
	12/13/18	Update for Permit Modification	BTM
	2/6/19	Update for NOIA	BTM
	8/22/19	Update for NOIA	BTM
	3/6/20	Add pond and monitoring points	BTM
	4/17/23	Revise Proposed Berm	BTM

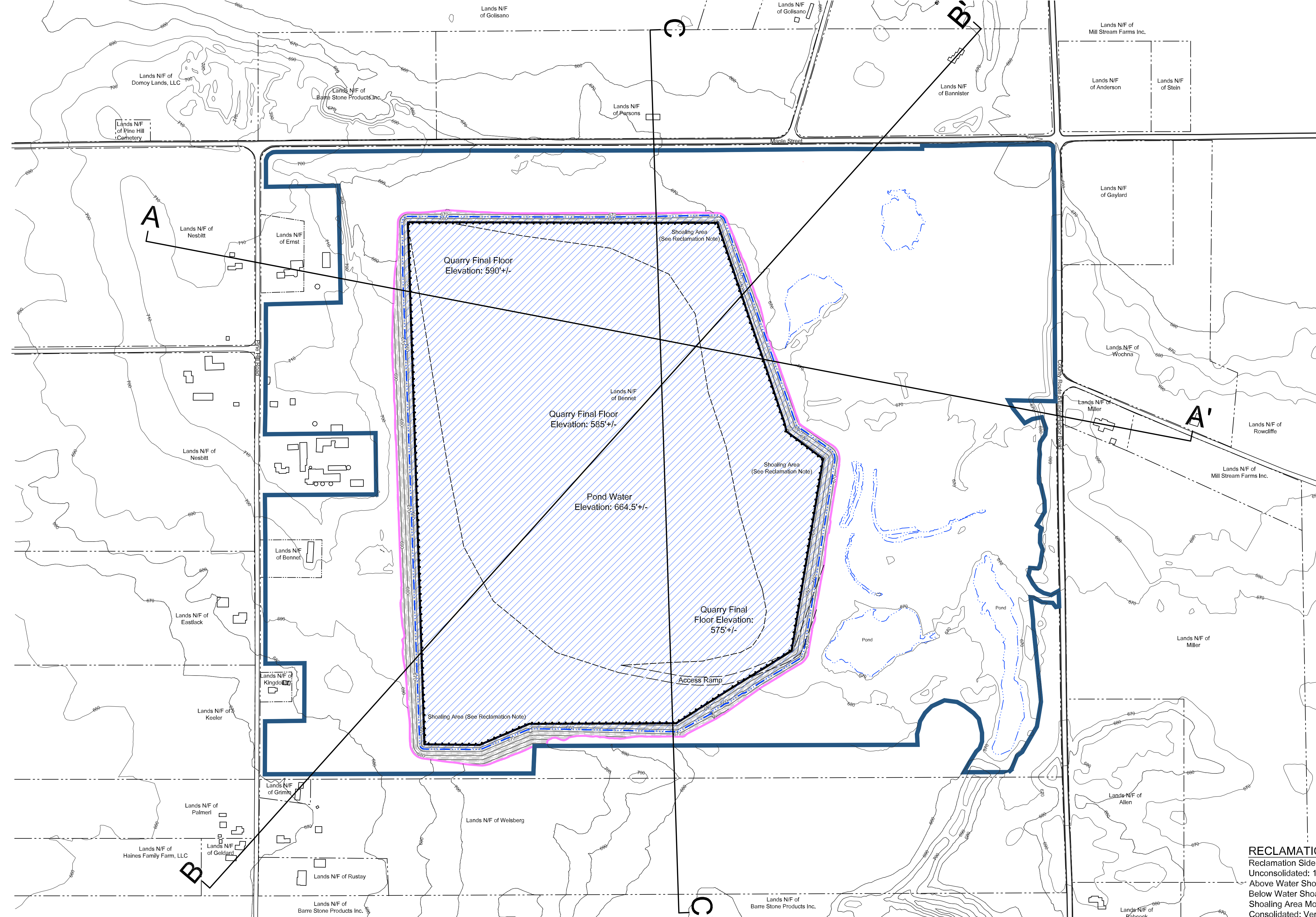
LEGEND	Description
	Property Line
	Life of Mine Boundary
	10' Contour Line
	2' Contour Line
	Stream/Edge of Water
	Structure
	Unpaved Road
	Paved Road
	Stormwater Conveyance
	Federal Wetland Boundary
	425' Federal Wetland Setback
	Monitoring Well
	Direction of Mining
	1000' Quarry Setback



NOTES
 Base Maps & Background Information
 1. Life of Mine derived from: Eagle Harbor Sand & Gravel, Inc. Eagle Harbor Mine Site Mining Plan Map by Advanced Environmental Geology, dated: 7/18/2014.
 2. Property Lines derived from: Eagle Harbor Sand & Gravel, Inc. Eagle Harbor Mine Site Mining Plan Map by Advanced Environmental Geology, dated: 7/18/2014 and Orleans County Tax Maps.
 3. Elevation contours outside of survey area derived from LIDAR dataset provided through NYSGIS Clearinghouse available at <http://www.orthos.dhss.ny.gov/>.
 4. Certain map features outside of survey area digitized from digital high resolution aerial orthophotos provided from the National Aerial Imagery Program (NAIP) and the NYSGIS Clearinghouse.

ACREAGE SUMMARY

	Acres Currently Permitted To Be Affected By Mining Activities During the Current Mining Permit Term: 85.5+/- acres
	Lands Approved As Reclaimed By NYSDEC: 149.4+/- acres
	Reclaimed Lands Within the Life Of Mine To Be Reaffected By Mining Activities During the Current Permit Term: 13.5+/- acres
	Total Lands To Be Affected By Mining Activities During the Permit Term: 99.0+/- acres
	Life Of Mine Area: 250.6+/- acres
	Bedrock Excavation Area: 99.7+/- acres
	Sand Mining/Stripping Area: 114.3+/- acres



RECLAMATION NOTE
 Reclamation Side Slopes Will Be No Steeper Than:
 Unconsolidated: 1V on 2H
 Above Water Shoaling Area Within 5 Feet of Waters Edge: 1V on 3H
 Below Water Shoaling Area To A Depth of 6 Feet: 1V on 3H
 Shoaling Area More Than 6 Feet Below Water: 1V on 2H
 Consolidated: Vertical

RECLAMATION PLAN MAP

Eagle Harbor Mine
 NYSDEC Mine ID: 80171
 Eagle Harbor Sand & Gravel, Inc.
 Town of Barre, Orleans County, New York

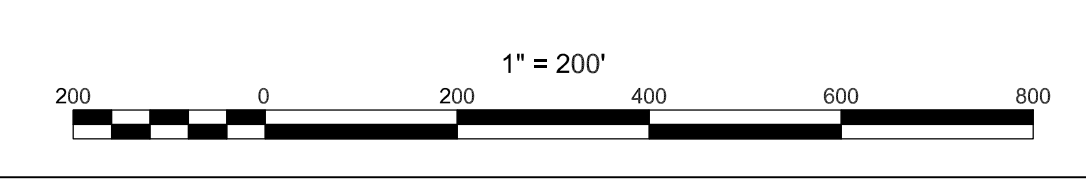
REVISIONS

Date	Description	By
12/13/18	Update for Modification	BTM
8/22/19	Update for NOIA	BTM

LEGEND

	Property Line
	Life of Mine Boundary
	10' Contour Line
	Stream/Edge of Water
	Structure
	Unpaved Road
	Paved Road

SCALE



NOTES

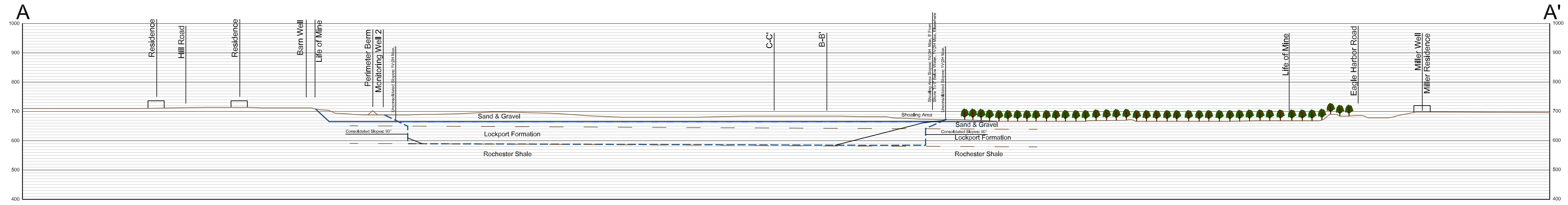
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ACREAGE SUMMARY

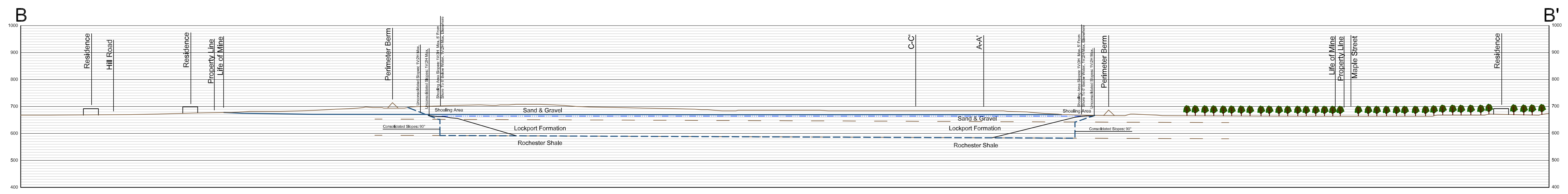
	Life of Mine Area: 250.6 +/- acres
	Bedrock Excavation Area: 99.7 +/- acres
	Sand Mining/Stripping Area: 114.3 +/- acres
	Lands Reclaimed To Pond: 107 +/- acres

Prepared by:
strategic mining solutions
 prospecting • planning • permitting • problem solving
 Strategic Mining Solutions LLC
 Geologists & Mining Consultants
 1149 County Highway 27
 Richfield Springs, New York 13340
 brian@miningstrategy.com

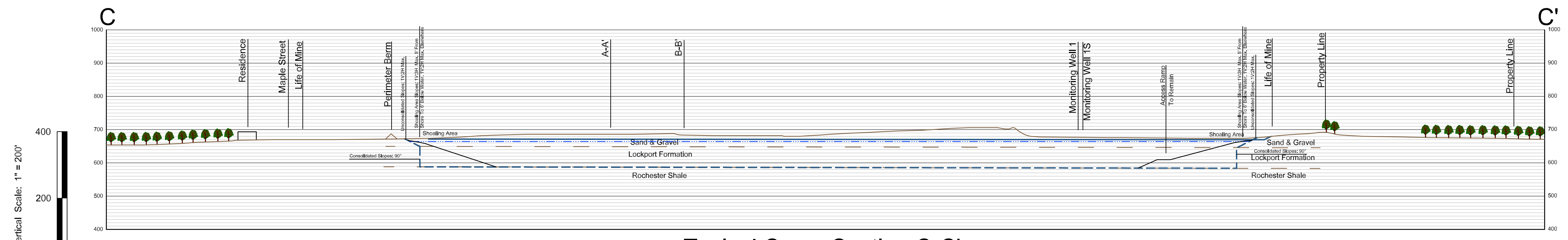
Details:
 Date: August 17, 2016
 Horizontal Scale: 1" = 200'
 Datum: Mean Sea Level
 USGS Quad: Knowlesville
 Contour Interval: 10 feet
 Drafted by: Milliman



Typical Cross-Section A-A'
Looking Northeastly



Typical Cross-Section B-B'
Looking Northwestly



Typical Cross-Section C-C'
Looking Easterly

Vertical Scale: 1" = 200'
Horizontal Scale: 1" = 200'
Vertical Exaggeration: None

RECLAMATION NOTE
Reclamation Side Slopes Will Be No Steeper Than:
Unconsolidated: 1V on 2H
Above Water Shoaling Area Within 5 Feet of Waters Edge: 1V on 3H
Below Water Shoaling Area To A Depth of 6 Feet: 1V on 3H
Shoaling Area More Than 6 Feet Below Water: 1V on 2H
Consolidated: Vertical

Cross-Sections A-A' - C-C'

Eagle Harbor Mine

Eagle Harbor Sand & Gravel, Inc.
Town of Barre, Orleans County, New York

Prepared by:
strategic mining solutions
prospecting • planning • permitting • problem solving
Strategic Mining Solutions LLC
Geologists & Mining Consultants
1149 County Highway 27
Richfield Springs, New York 13340
brian@miningstrategy.com

Details:
Survey Date: June 5, 2018
Horizontal Scale: 1" = 200'
Vertical Scale: 1" = 200'
Vertical Exaggeration: None
Datum: Mean Sea Level
Drafted by: Milliman

REVISIONS		
Date	Description	By
12/13/18	Update for permit modification	BTM
8/22/19	Update for NOIA	BTM

LEGEND	
	Current Profile
	Approximate Water Table
	Permitted Excavation Limits
	Proposed Consolidated Mining Limits
	Bedrock Geology
	Approximate Extent of Shoaling Areas

NOTES
Base Maps & Background Information
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