

May 20, 2022

Mr. Andrew DeLeeuw  
Chair, Mineral Licensing Board, Sharon Township  
18010 Pleasant Lake Road  
Manchester, MI 48158

RE: Final Revisions to Mineral License Application

Dear Mr. DeLeeuw:

Enclosed please find the following revisions to Aggregate Industries' mineral license application:

- Page 3:
  - Item e. (6): Revised to read "Sheet C201."
  - Item e. (10): Indicated existing monitoring wells are also shown on the survey.
- Page 6:
  - Item k: Revised language regarding the required letter of credit.
  - Item n: Updated based on the application fee payment previously made.
- Page 7:
  - Item p: Revised the description of "East Pit Mining" to fix the order of activities.
- Page 8:
  - Item p: Corrected the lake acreage to match what is shown on the plans.
  - Item p: Added language to reflect that temporary storage of borrow material will occur on the east site until it gets used for reclamation.
- Attachment 2:
  - Plan Sheet C201: Revised to show temporary soil storage area per Spicer's May 13, 2022 reclamation cost estimate review letter.
  - Plan Sheet C301: Updated to show the approved water line crossing design beneath M-52 per MDOT's right-of-way permit.
- Reclamation Cost Estimate: Made the following changes per Spicer's estimate review letter:
  - Included a line item to remove the mining equipment and structures on the west site.
  - Clarified what is included in the mobilization and general conditions line item.
  - Increased the unit price for mobilization and seed/mulch/fertilize line items.
  - Provided a line item for imported fill on the east site.

Four hardcopies of each revised item will be delivered to Sharon Township by May 26<sup>th</sup>. AI's treasurer is in the process of obtaining a letter of credit in the amount of \$2,200,000 from our bank. We expect to deliver it to you no later than May 26<sup>th</sup> as well.

Please feel free to contact me at any time if you have any questions, comments, or concerns as related to these final application items.

Regards,

A handwritten signature in black ink, appearing to read "Rob Hayes". The signature is stylized with a large initial "R" and a long horizontal stroke.

Rob Hayes, P.E.  
Regional Environment & Land Services Manager  
Great Lakes Region

Attachments

cc: Greg Kolodziej, AI  
Daniel Klimmek, AI  
Caroline Depp, AI

- e. **Detailed drawings, prepared by a land surveyor or registered professional engineer, showing the following:**
- (1) **Existing site improvements including buildings, drives, wells, and drain fields;**  
*Refer to Sheet C101 of the plan set in Attachment 2.*
  - (2) **Existing topography at contour levels of two (2) feet, interpolated from US Geological Survey (USGS) data, unless an interval of less than two (2) feet is deemed necessary for review by the Township Engineer at the Pre-Application Conference;**  
*Refer to Sheet C101.*
  - (3) **Extent of future mining areas and depth thereof;**  
*Refer to Sheet C301.*
  - (4) **Location and description of structures and stationary and/or portable equipment to be located on the site during mining operations;**  
*Refer to Sheet C201.*
  - (5) **Location and description of soil types**  
*Refer to Sheet C101.*
  - (6) **Tree areas and other natural features to be preserved**  
*See Note 3 on Sheet C201.*
  - (7) **Location and types of materials for visually screening the site**  
*See Note 4 on Sheet C201.*
  - (8) **Location and dimensions of drives**  
*Refer to Sheet C201.*
  - (9) **Lane widening on public roads at intersections with drives**  
*Lane widening of public roads is not proposed.*
  - (10) **Locations of test wells for monitoring water quality**  
*The locations of existing groundwater monitoring wells are shown on Sheet C101 and the Piatt Land Surveying Boundary Survey contained in the plan set in Attachment 2; proposed wells are shown on Sheet C201.*

*Refer to the Reclamation Plan shown on Sheet C302 of the plan set in Attachment 2 for a depiction of elements (1) through (7). Sheet C301 gives the proposed dates for completing extraction operations at the West and East Properties; Sheet C302 provides the proposed dates for completing final restoration at the West and East Properties.*

- k. An irrevocable bank letter of credit in satisfactory form, in an amount sufficient to guarantee restoration of the site. In fixing the amount of such letter of credit, the mineral license board shall take into account the size and scope of the proposed excavation, probable cost of rehabilitating the premises upon default of the operator, recommendation of the Township Engineer, estimated expenses to compel operator to comply by court decree, and such other factors and conditions as might be relevant in determining the sum reasonable in the light of all facts and circumstances surrounding each application.**

*AI will provide an irrevocable Letter of Credit in a form satisfactory to the Township in an amount of \$2,200,000, as determined by the Mineral License Board, to guarantee restoration of the site.*

- l. Michigan State Fire Marshal and/or Michigan State Police permit for the on-site storage or transfer of fuels; or a written indication from the applicable agency that a permit is not required.**

*The aboveground fuel storage tanks at the site, both existing and proposed, do not have capacities larger than 1,100 gallons and therefore are not required to be registered with the State of Michigan Department of Licensing and Regulatory Affairs in accordance with Michigan Flammable and Combustible Liquids Rules.*

- m. A proposed liability insurance policy of not less than \$1,000,000 per incident for all liability claims arising out of the site.**

*An example of AI's proposed insurance coverage is included in Attachment 5. Sharon Township would be named as the certificate holder and a complete policy provided to the Township once it is issued.*

- n. An application fee, in an amount established by resolution of the Township Board, shall be provided at the time of the application submittal.**

*A check for \$23,500 was delivered to the Township in early December 2021.*

- o. The first annual license fee, in an amount established by resolution of the Township Board, shall be provided at the time of application submittal and, if approved, subsequently by January 31st of each calendar year. The fee shall be held in escrow pending decision on granting the application.**

*AI will submit its first annual license fee as directed by the Township.*

- p. A description of the proposed operation including whether it is for mining and/or processing; and specifications of whether the applicant will perform**

**extraction methods in a manner that does or does not require artificial means to lower the existing groundwater table.**

#### West Pit Mining

*Al's proposed mining and processing operation would begin on the west parcel by stripping and temporarily storing any remaining overburden from inside the mining limits with bulldozers, and then extracting the underlying dry sand and gravel using front end loaders.*

*Once the vertical extent of mining reaches the groundwater table (at approximately 20 feet below ground surface), a dragline crane would be used to extract wet sand and gravel. Because mining beneath the water table will be done in this manner, artificial means to lower the groundwater table will not be necessary (i.e., the dragline's bucket will extract material from the water without affecting its elevation, so there would be no need to depress the water table to access the material).*

*Al proposes to use portable feeders, crushers, conveyors, dry screens, wash screens, and stackers (i.e., a fixed plant will not be installed).*

*Extracted material would be fed into a vibratory feeder, then conveyed, crushed, screened, and washed using clean water withdrawn from the pit. The final products made from the west pit's reserve would be stored in stockpiles classified by product type. It is anticipated that mining the west property would span from roughly 2022 through 2026.*

*Sediment-laden wash water would be collected and pumped to the east property via a crossing under Highway M-52 and discharged to the first of three connected settling ponds to be constructed on the east parcel. A pump at the outlet of the third settling pond would send the fresh water back to the west property's pit in a pipeline placed parallel to the wash water pipe.*

*Customer trucks would enter the west property from M-52, get loaded using front end loaders, and then weighed at the scale house before exiting the site.*

#### East Pit Mining

*Once material processing of the sand and gravel reserves at the West Pit has been completed, Al would relocate the portable plant equipment listed above to the East Pit. Similar to the West Pit's mining operation, mining the East Pit would begin by stripping and temporarily storing any remaining overburden from inside the mining limits with bulldozers, and then extracting the underlying dry sand and gravel using front end loaders.*

*Once the vertical extent of mining reaches the groundwater table (at approximately 10 feet below ground surface), a dragline crane would be used to extract wet sand and gravel. Because mining beneath the water table will be done in this manner, artificial means to lower the groundwater table will not be necessary (i.e., the dragline's bucket will extract material from the water without affecting its elevation, so there would be no need to depress the water table to access the material).*

*Extracted material would be fed into a vibratory feeder, then conveyed, crushed, screened, and washed using clean water from the pit. The final products made from the west pit's reserve would be stored in stockpiles classified by product type. It is anticipated that mining the east property would span from roughly 2025 through 2029.*

*Sediment-laden wash water would be collected and pumped to the adjacent settling ponds to be constructed on the east parcel. A pump at the outlet of the third settling pond would send the fresh water back to the east pit to supply clean water to the wash screen.*

*Customer trucks would enter the east property from M-52 and get loaded using front end loaders. Depending on future demand, scaling would be done by either: 1) installing a truck scale on the East Property; or 2) using a bucket scale as trucks are loaded and then weighing the trucks at the existing scale house on the West Property. Regardless of how they are weighed, all trucks would egress onto M-52.*

#### West Pit Reclamation

*Beginning in 2023, AI would start to reclaim disturbed portions of the west property using excess uncontaminated material available on site. Disturbed areas would be reclaimed to create slopes filled and graded not to exceed 4H:1V, covered with topsoil, and hydroseeded. An approximate 7.6-acre lake would remain as the result of underwater mining. The lake's bottom would be sloped not to exceed 5H:1V to a depth of five (5) feet and will not be deeper than 50 feet.*

*It is anticipated that reclaiming the west property would span from roughly 2023 through 2027 in a progressive manner such that when excess material from mining operations becomes available, it will be incorporated into reclaimed slopes that same year (i.e., no stockpiles of excess material for more than a year and no borrow material needed for reclamation).*




#### East Pit Reclamation

*Beginning in 2026, AI would start to reclaim disturbed portions of the east property using excess uncontaminated material available on site. Disturbed areas would be reclaimed to create slopes filled and graded not to exceed 4H:1V, covered with topsoil, and hydroseeded. An approximate 10.7-acre lake would remain as the result of underwater mining. The lake's bottom would be sloped not to exceed 5H:1V to a depth of five (5) feet and will not be deeper than 50 feet.*

*It is anticipated that reclaiming the east property would span from roughly 2026 through 2030 in a progressive manner such that when excess material from mining operations becomes available, it will be incorporated into reclaimed slopes that same year (i.e., no stockpiles of excess material for more than a year although approximately 46,000 cubic yards of borrow material will be needed for reclamation).*

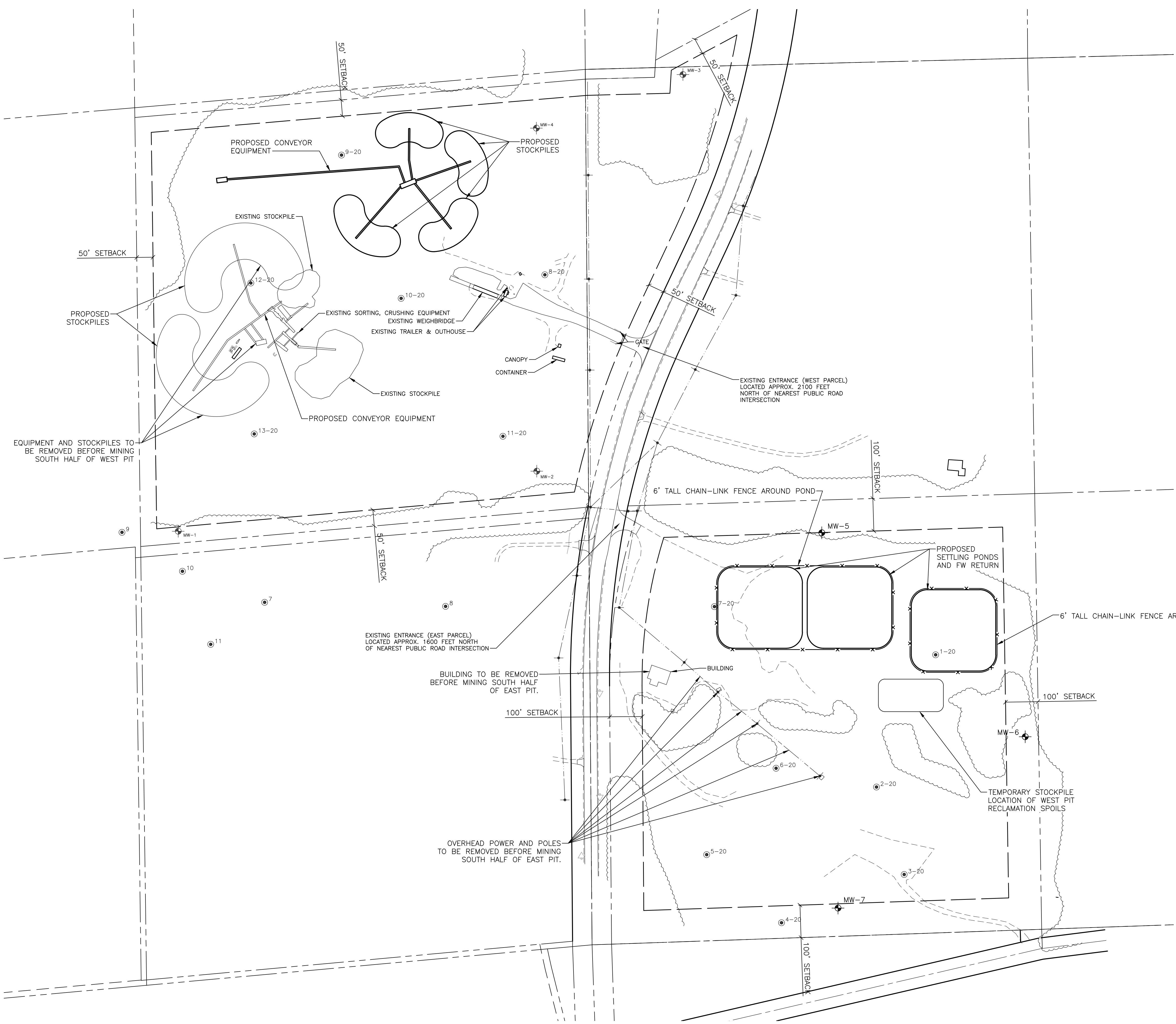
- q. Drawings, aerial photographs and plans submitted with an application shall be correlated by transparent overlays, combined maps or other means that clearly set forth site features and proposed features and requirements of this**

**SYMBOL LEGEND**

-  MONITORING WELL
-  SOIL BORING
-  UTILITY POLE

**NOTES**

1. SETBACKS SHOWN PER SHARON TOWNSHIP ZONING ORDINANCE AND MINERAL EXTRACTION ORDINANCE.
  - 1.1. RESOURCE CONSERVATION (RC)
    - 1.1.1. FRONT - 75' \*
    - 1.1.2. SIDE - 50' \*
    - 1.1.3. REAR - 50' \*
    - \*PLUS 30' WHEN ABUTTING RC, AG, AND R ZONING
  - 1.2. EXCAVATION, LOADING, STOCKPILING OPERATIONS
    - 1.2.1. 250' FROM ANY R/W LINE
    - 1.2.2. 250' FROM ANY PROPERTY LINE
    - 1.2.3. 500' FROM ANY RESIDENCE
    - 1.2.4. 500' FROM STREAM (EXCAVATION ONLY)
  - 1.3. WEST PARCEL SET BACK SHOWN AT 50' PER EXISTING VARIANCE GRANTED BY SHARON TOWNSHIP IN 2006.
  - 1.4. EAST PARCEL SET BACK SHOWN AT 100' SEEKING VARIANCE AS ALLOWED IN SECTION 2.16 OF THE SHARON TOWNSHIP MINERAL EXTRACTION ORDINANCE.
2. ENTRANCES ARE TO BE LOCATED 500' MINIMUM FROM ALL PUBLIC ROAD INTERSECTIONS.
3. TREE AREAS AND OTHER NATURAL FEATURES WITHIN THE RESOURCE CONSERVATION SETBACKS ARE TO BE PRESERVED.
4. BOTH THE EAST AND WEST PARCELS ARE SURROUNDED BY NATURAL SCREENING. NO ADDITIONAL BERMS, FENCES, OR LANDSCAPING PROPOSED.
5. HOURS OF OPERATION BETWEEN 7:00 AM AND 6:00 PM, MONDAY THROUGH SATURDAY. NO OPERATIONS PERMITTED ON SUNDAYS OR LEGAL HOLIDAYS.
6. "KEEP-OUT-DANGER" SIGNS TO BE PLACED AROUND PERIMETER NOT MORE THAN TWO HUNDRED (200) FEET APART.



**SITE PLAN**  
SCALE: 1" = 150'  
0 75 150 300

PLOT INFO: Z:\2021\211302\CADD\C201\211302.DWG LAYOUT: C201 DATE: 5/20/2022 TIME: 12:52:30 PM USER: BRANDOLPH

**Aggregate Industries**  
Sharon Township, Washtenaw County, MI  
Mineral Extraction

**REVISIONS**

**NOT FOR CONSTRUCTION**

5/20/2022	REVISED FOR PERMIT
11/30/2021	ISSUED FOR PERMIT
Drawn By	EJR
Designer	EJR
Reviewer	ASM
Manager	LMS

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
**211302**  
SHEET NO.

**C201**

PLOT INFO: Z:\2025\132\CADD\C301\132.DWG LAYOUT: C301 DATE: 3/4/2022 TIME: 3:16:54 PM USER: CMAYER



**MINING OPERATION GRADING PLAN**

SCALE: 1" = 150'  
0 75 150 300

**MISS DIG 811**  
3 full working days before you dig  
1-800-482-7171  
on the web at: www.missdig.org

**BENCHMARKS**

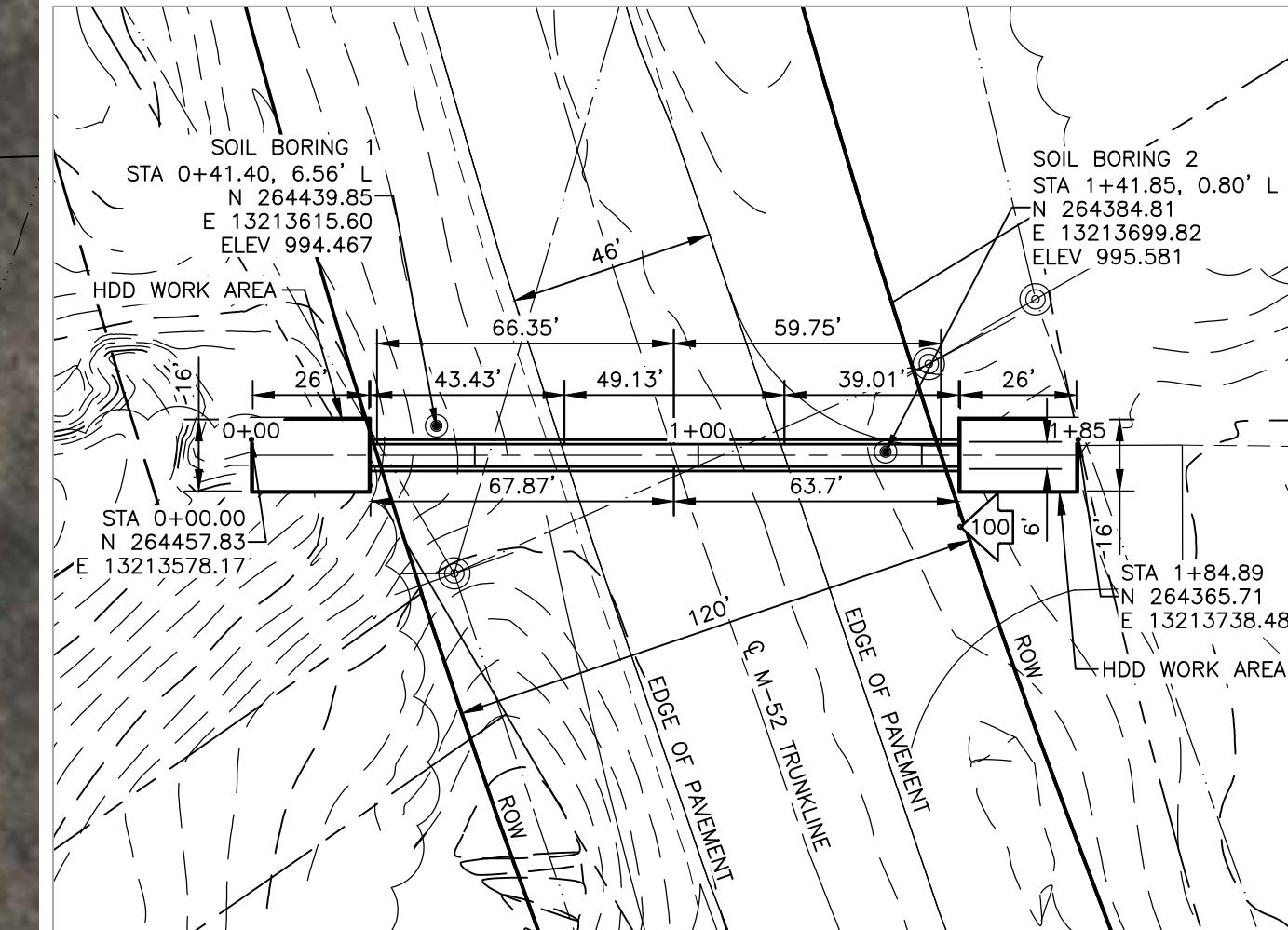
BM 100 ELEV. 994.91  
PK NAIL IN MIDDLE OF CONCRETE DRIVE  
N: 264361.90  
E: 13213705.95  
DATUM: NAVD 88

**SYMBOL LEGEND**

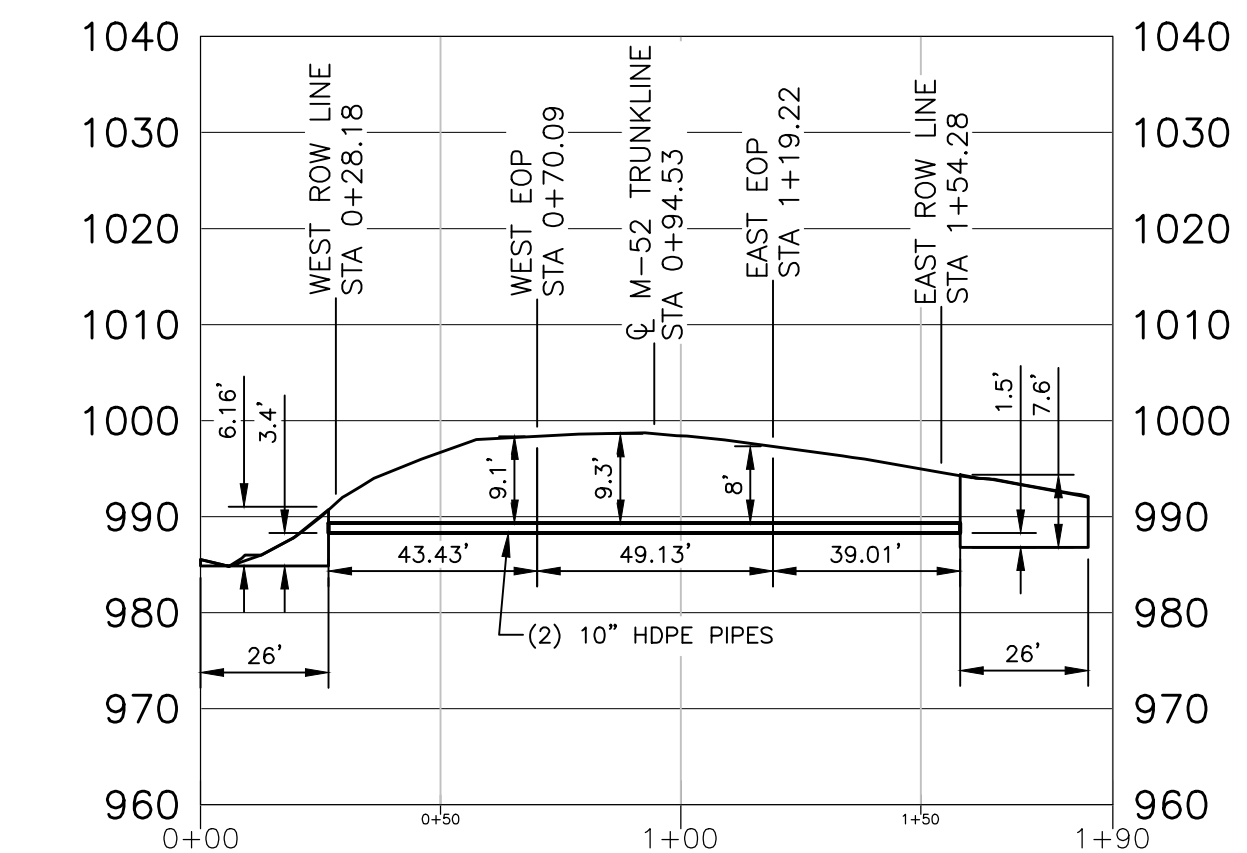
- BENCHMARK (BM)
- MONITORING WELL
- SOIL BORING
- UTILITY POLE
- 725'- EXISTING MAJOR CONTOUR
- 724'- EXISTING MINOR CONTOUR
- 725'- PROPOSED MAJOR CONTOUR
- 724'- PROPOSED MINOR CONTOUR

**NOTES**

1. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
2. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
3. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
4. GRADE AREAS AT EXTRACTION PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
5. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
6. PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
7. DRY MINING FROM EXISTING GRADE TO ELEVATION 950' UNDERWATER MINING BELOW ELEVATION 950'.
8. BOTTOM OF WET MINES TO BE FLAT AT ELEVATION 900.00.
9. SLOPE SIDES FROM BOTTOM OF WET MINE AT 3:1 TO A DEPTH OF 6' BELOW WATER LEVEL (944) THEN AT A SLOPE OF 5:1 TO AN ELEVATION OF 952.00 THEN AT A SLOPE OF 4:1 TO EXISTING GRADE.



**M-52 CROSSING PLAN**

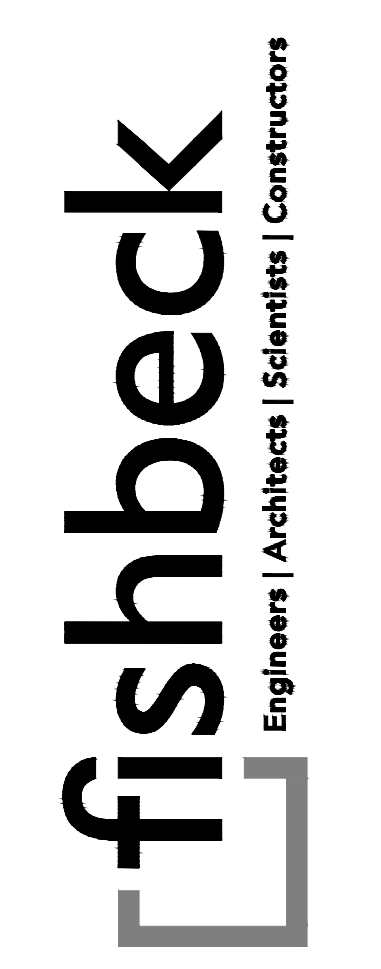


**M-52 CROSSING SECTION**

SCALE: 1" = 40'  
VERTICAL SCALE: 1" = 20'  
0 20 40 80

LENGTH OF BORE: 2 PARALLEL BORES AT 132" EA. SPACED 6" CENTER TO CENTER  
DIAMETER OF BORE: 15" DIA.  
PAVEMENT TYPE: ASPHALT  
SHOULDER TYPE: PAVED & CRUSHED STONE  
COMMENTS: HDPE SDR 11 (200 PSI)

**Aggregate Industries**  
Sharon Township, Washtenaw County, MI  
Mineral Extraction



**REVISIONS**

**NOT FOR CONSTRUCTION**

03/04/2022 PERMIT RESUBMITTAL  
03/01/2022 PERMIT RESUBMITTAL  
11/30/2021 ISSUED FOR PERMIT

Drawn By: EJR  
Designer: EJR  
Reviewer: ASM  
Manager: LMS

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
**211302**

SHEET NO.

**C301**

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## Engineer's Opinion of Probable Cost - Reclamation

Project: AI/Manchester Mineral Extraction  
 Project No.: 211302

Prepared By: EJR  
 Date: 5/20/2022



Item No.	Item Description	Units	Total Estimated Quantity	Unit Price	Amount
<b>West Parcel</b>					
<b>General Conditions</b>					
	Mobilization & General Conditions *	LS	1	\$33,000.00	\$33,000
<b>Demolitions, Removals, &amp; Relocations</b>					
	Mining Operations Equipment	LS	1	\$100,000.00	\$100,000
<b>Earthwork and Grading</b>					
	Grading	CYD	55800	\$3.00	\$167,400
	Excavation (Haul off to East Parcel)	CYD	4820	\$5.00	\$24,100
<b>Landscaping</b>					
	Import Topsoil and Place, 4-inch	CYD	14500	\$20.00	\$290,000
	Seed, Mulch, Fertilize	SYD	167800	\$2.10	\$352,380
<b>West Parcel Subtotal</b>					<b>\$966,900</b>
<b>East Parcel</b>					
<b>General Conditions</b>					
	Mobilization & General Conditions	LS	1	\$33,000.00	\$33,000
<b>Demolitions, Removals, &amp; Relocations</b>					
	Abandon 10 " HDPE Water Line, Flowable Fill	CYD	2	\$150.00	\$240
	10" HDPE Water Line Removal (On grade)	LF	2700	\$5.00	\$13,500
	Fence Removal	LF	2470	\$4.00	\$9,880
<b>Earthwork and Grading</b>					
	Grading	CYD	74820	\$3.00	\$224,460
	Import Fill Material	CYD	46000	\$11.00	\$506,000
<b>Landscaping</b>					
	Import Topsoil and Place, 4-inch	CYD	8667	\$20.00	\$173,340
	Seed, Mulch, Fertilize	SYD	129900	\$2.10	\$272,790
<b>East Parcel Subtotal</b>					<b>\$1,233,300</b>
<b>Reclamation Cost Total</b>					<b>\$2,200,200</b>

\* Mobilization includes all activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the contractor's operations at the site; and demobilization which includes all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of offices, buildings, and other facilities assembled on the site specifically for the contract.

General Conditions include items and resources needed for project completion that will not be part of the finished product that is turned over and includes items such as Site Management, Project Management, Material Handling, and Trash Removal.