

Elmer's Crane and Dozer, Inc.

*4281 Pickerel Lake, Petoskey, MI
Emmet County Planning Commission
Presentation for a Level III Special Use
Permit for Resource Mining*

Elmer's Crane and Dozer, Inc.

- Family owned and operated for over 60 years
- Been serving the road, underground utility (sewer/water) and site development needs of the Petoskey area for over fifteen (15) years.
- Our office in downtown Petoskey at Penn Plaza has been open for three years.
- We currently have two (2) project managers and eleven (11) field personnel locally employed.

Notable Projects

Atkins Road



Mitchell Street Downtown



More Notable Projects

Arlington Avenue & Greenway



Lears Road



Our Sites are Clean and Organized



We expect our equipment to be clean and organized on our sites. This picture was taken of a site in Petoskey in July 2017.

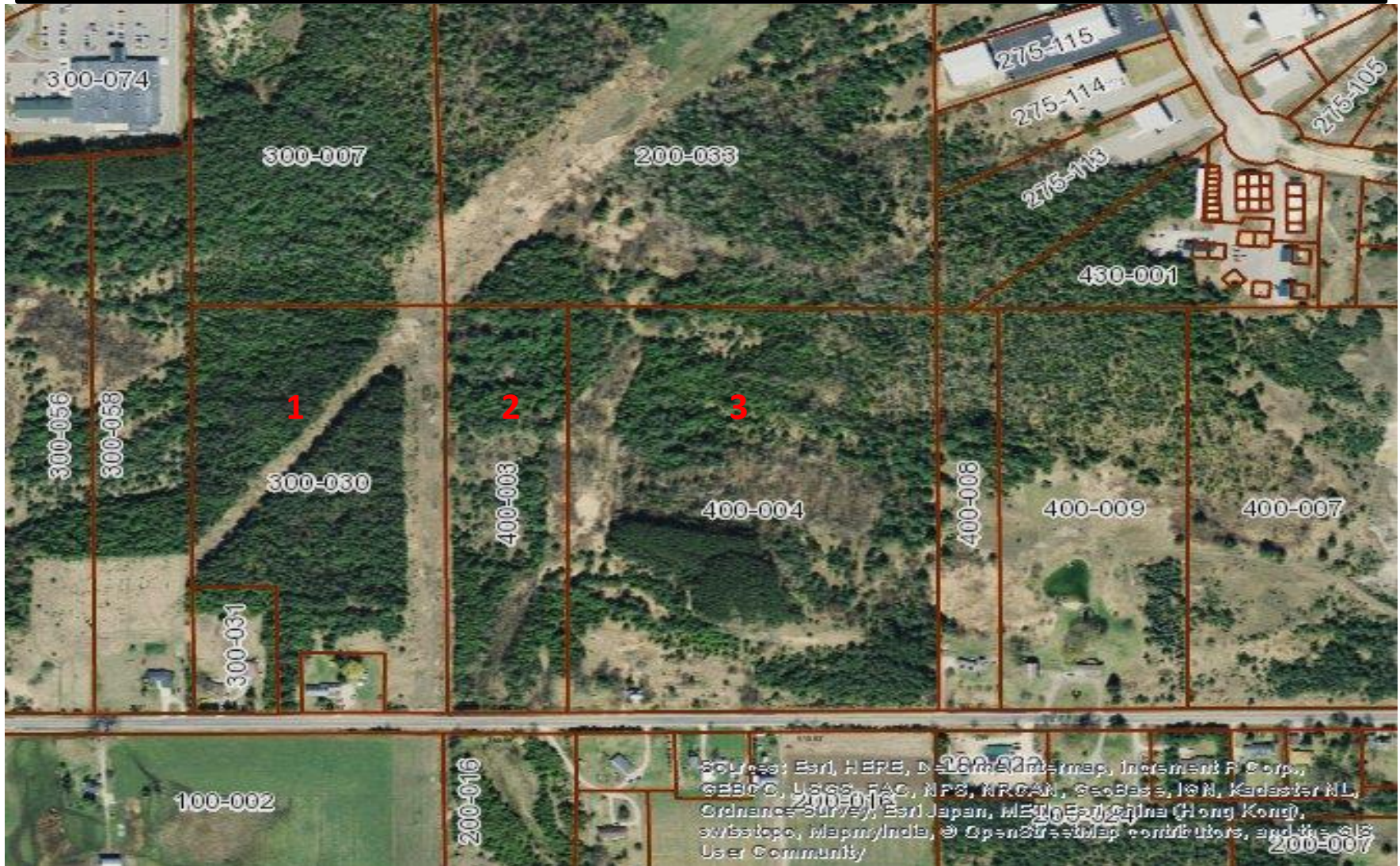
General Site Area



The proposed site is adjacent to more commercial/industrial operations than any other similar resource in the map area. Existing resources already use "outgoing" roads we expect to use.

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Site Location



Site Description and Use

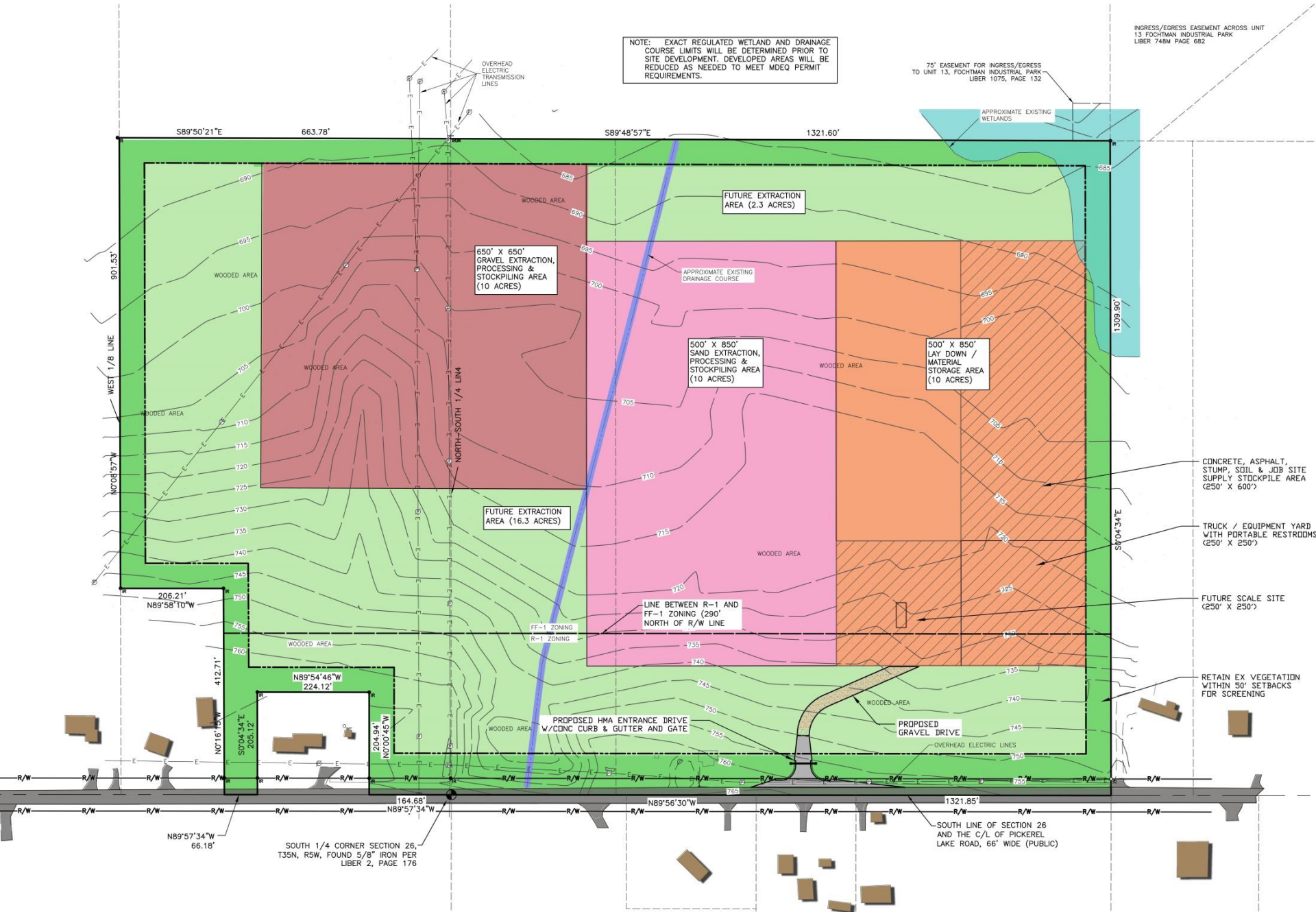
- 55 acre rectangular site ranging approximately 2,000 feet east to west and 1,300 feet north to south
 - 10 acre lay down area used to (1) park trucks and equipment; (2) receive and recycle organic materials, concrete and asphalt from construction sites; and (3) process and store recycled concrete and asphalt to improve construction sites in the local area.
 - 10 acre area where we will extract, process and stockpile sand used to improve construction sites in local area.
 - 10 acre area where we will extract, process and stockpile gravel used to improve construction sites in local area.
 - Remaining site used for access, setback, or future mining areas.

Site Plan

NOTE: EXACT REGULATED WETLAND AND DRAINAGE COURSE LIMITS WILL BE DETERMINED PRIOR TO SITE DEVELOPMENT. DEVELOPED AREAS WILL BE REDUCED AS NEEDED TO MEET MDEQ PERMIT REQUIREMENTS.

75' EASEMENT FOR INGRESS/EGRESS TO UNIT 13, FOCHTMAN INDUSTRIAL PARK LIBER 1075, PAGE 132

INGRESS/EGRESS EASEMENT ACROSS UNIT 13 FOCHTMAN INDUSTRIAL PARK LIBER 748M PAGE 682



Other Site Items of Note

- Topographical survey completed and included on the site plan.
- USDA Soils Report completed and included with the permit application.
- 50 foot setback from property lines; existing screening to remain as depicted on site plan.
- 100 foot utility easement for power line on northwest side of site; 50 feet on either side of the powerlines.
- Wetland noted by US Fish and Wildlife, and field examined by our staff, in northeast corner of site which we will protect.
- Easement from site to Fochtman Industrial Park in wetland area in northeast corner considered unusable.

Soil Investigation and Expected Excavation Depth/Volumes

- Used excavator to dig twenty eight (28) test holes to determine soil type on the site.
- Based test hole results, we intend to excavate sand and gravel to groundwater level anticipated to be an average of 20 feet throughout the site.
- Based on these estimates, and other production considerations, we expect to produce about 450,000 cubic yards from the current phase indicated on the site plan.

Actual Site Resources

Gravel



Sand



Community Impact

- Sanitary services – portable restroom
- Domestic water – existing well; no new wells planned
- Fire protection – provide gate key access to fire department
- Traffic volume – truck traffic at this location will be seasonal and intermittent. We will use this location when we need material or yard area for a local project.

Expected Traffic Volumes

- We expect to haul 25,000 tons annually from this resource principally from May - October (130 working days); this works out to the following number of loads per day based on stated type of truck:
 - Tandem dump truck – $1,700 \text{ loads} / 130 \text{ days} = 13 \text{ per day}$.
 - or**
 - Tractor/lead trailer – $893 \text{ loads} / 130 \text{ days} = 7 \text{ trips per day}$.
 - or**
 - Tractor/lead & pup trailers – $480 \text{ loads} / 130 \text{ days} = 4 \text{ trips per day}$.
- Based on our experience in the area, we anticipate average daily trips will be ten (10) per day.
- We included a worst case in our site plan application of fifty (50) trips per day. This number of trips would be rare based on our history of work in Petoskey.

Traffic Measures at Entrance

- Coordinate with the Emmet County Road Commission to:
 - install driveway with sight distance of 1,050 feet west and 1,200 feet east; this has already been field verified by Emmet County Road Commission. Drive placement is depicted on site plan.
 - install signs and pavement markings 1,000 feet to the east and west of our entrance from site to Pickerel Lake Road at our cost.
 - change existing center line striping to double lines between installed signs (east to west) in this section of road at our cost.

Signage for Traffic Awareness

Example 1



Example 2



Site Distance Consideration

- We believe site distance is a critical component to placement of our driveway for public safety. The drive is currently proposed to provide the maximum site distance in both directions and lined up directly across from an existing driveway on the South side of the road.
- Our sight access is based on 1,050-1,200 feet of sight distance and the proposed signs and pavement marking would be placed at 1,000 feet.
- According to the National Highway Traffic Administration, a driver, with dry roads and automobile in good repair, traveling 55 mph, given 1 ½ seconds to react will come to a complete stop in about 265 feet. This leaves another 785 to 935 feet to buffer slower reaction times, heavier vehicles and wet roads.
- The American Association of State Highway Transportation Officials (AASHTO) recommends 495 feet of sight distance for stopping at 55 mph. Our proposed entrance provide twice that sight distance in either direction.

1,000 Feet is over 3 Football Fields



Charles Dawley odawley@gmail.com

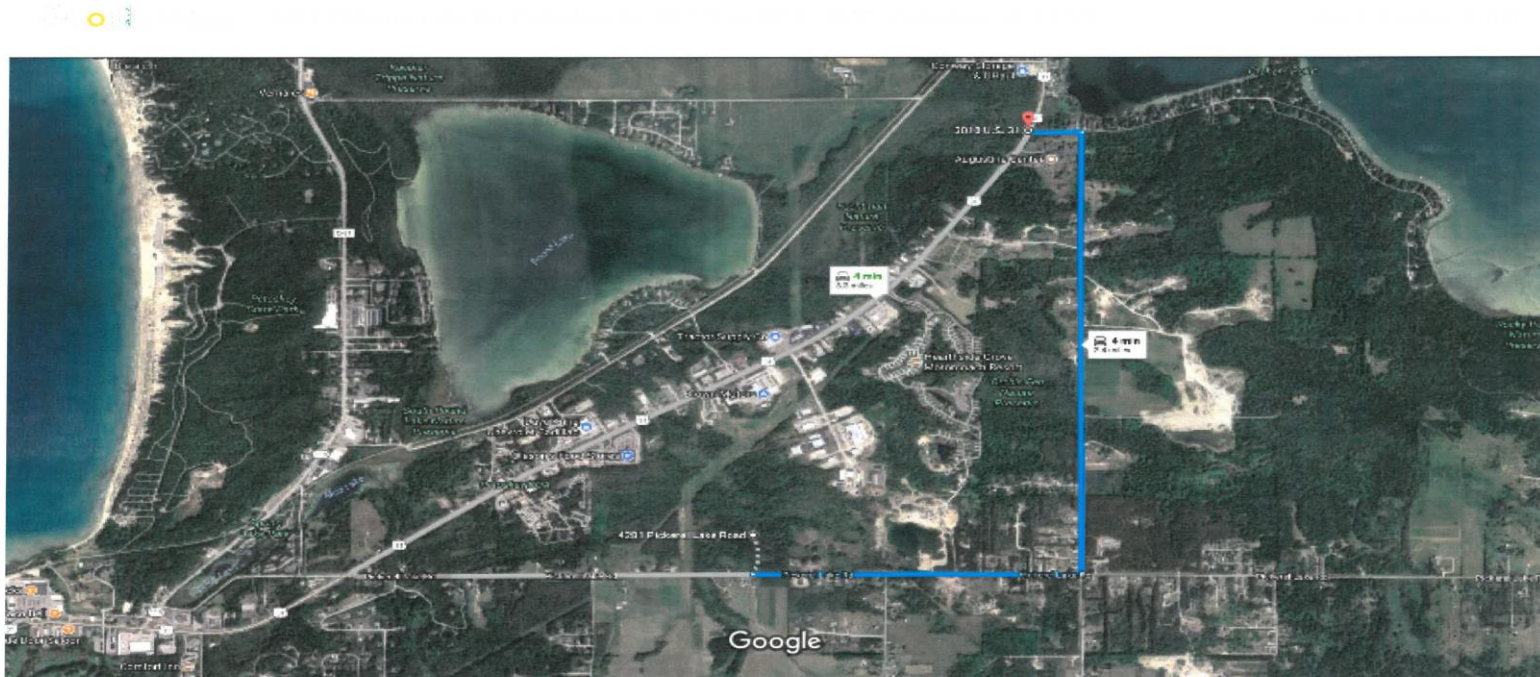
Other Traffic Actions

- We will request a traffic light, caution light and/or additional sign at US31/Pickerel Lake Road with local MDOT.
- While no light exists we will route outgoing traffic east on Pickerel Lake Road to Bellmer Road or Fletcher Road, where similar traffic is currently occurring for existing construction resource operations in this area.

Other Resource Activity Nearby

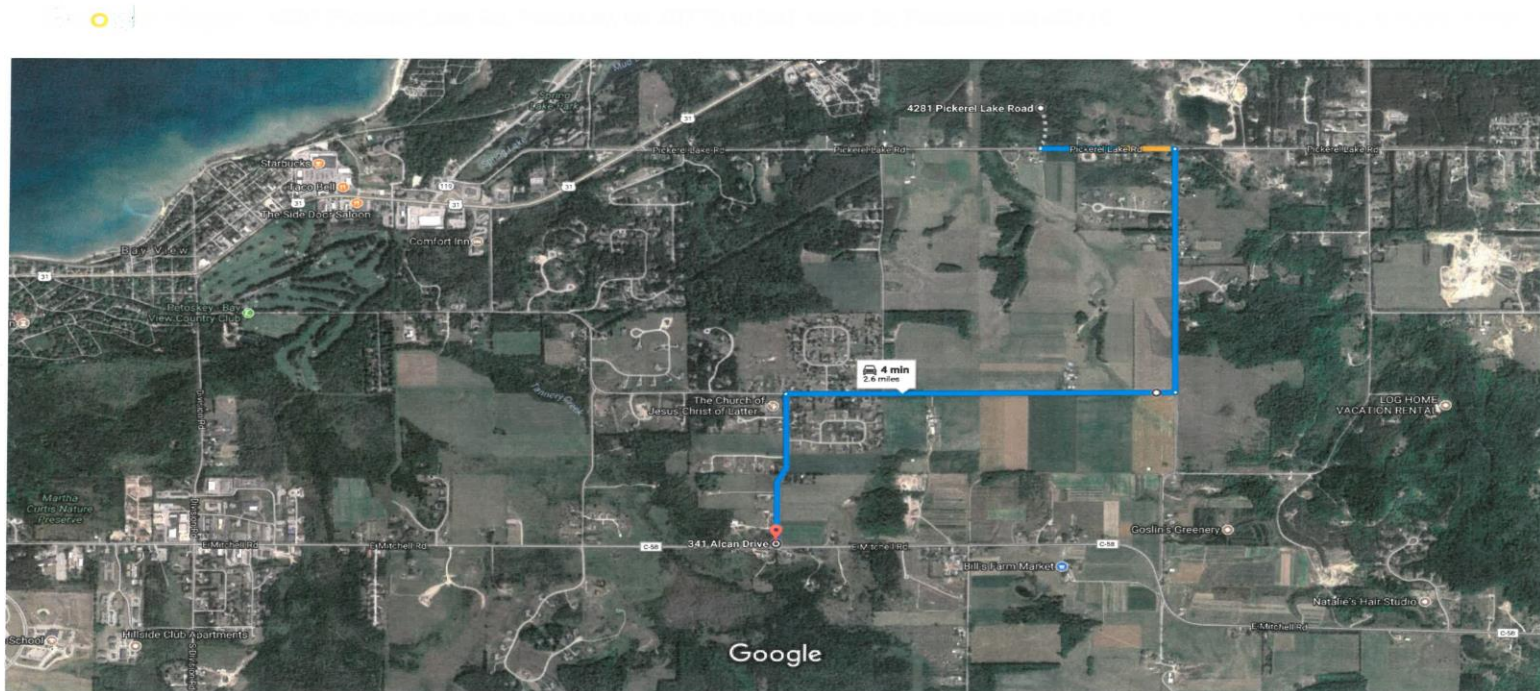


Outgoing Traffic Map - North



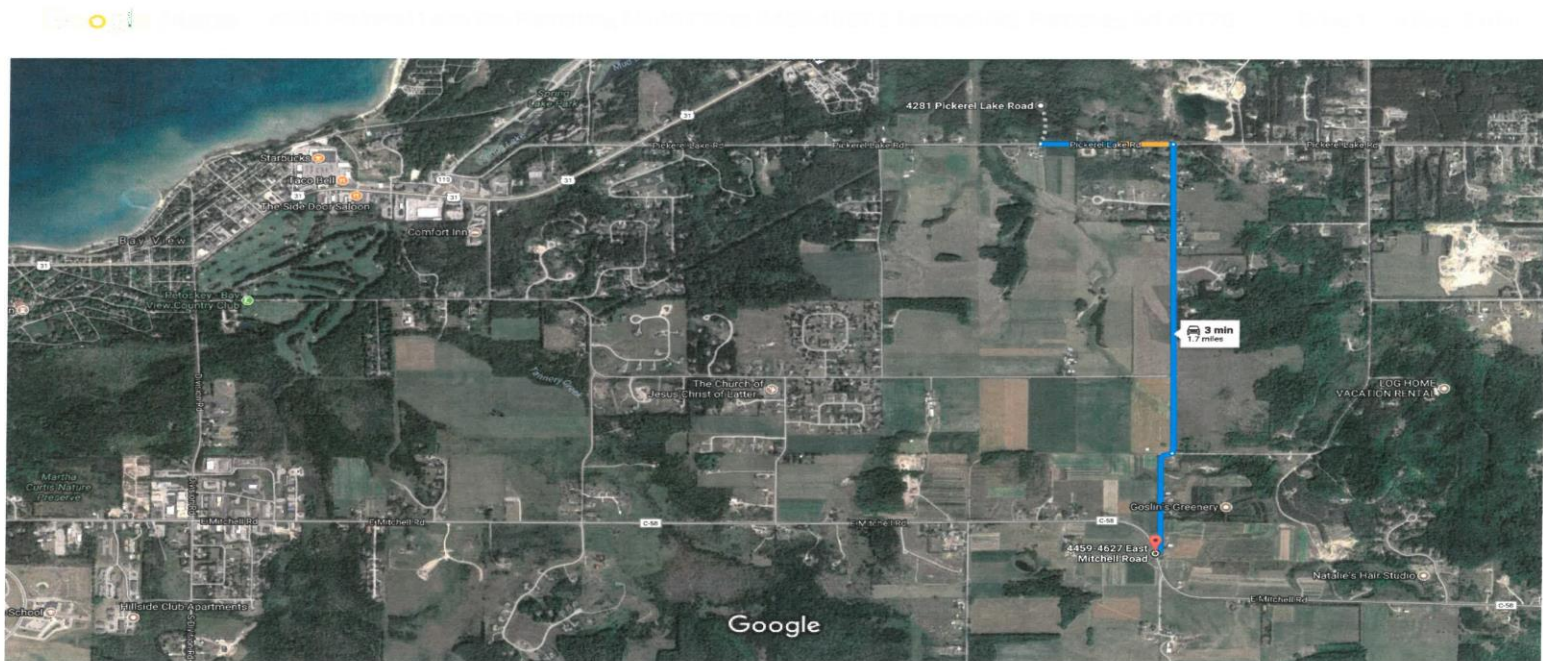
Pickerel Lake Road east to Bellmer Road; north to Graham Road; west to US31

Outgoing Traffic Map – South/West



Pickerel Lake Road east to Fletcher Road; south to Country Club Road; west to Alcan Drive; south to Mitchell Street

Outgoing Traffic Map – South/East



Pickerel Lake Road east to Fletcher Road; south to Mitchell Street

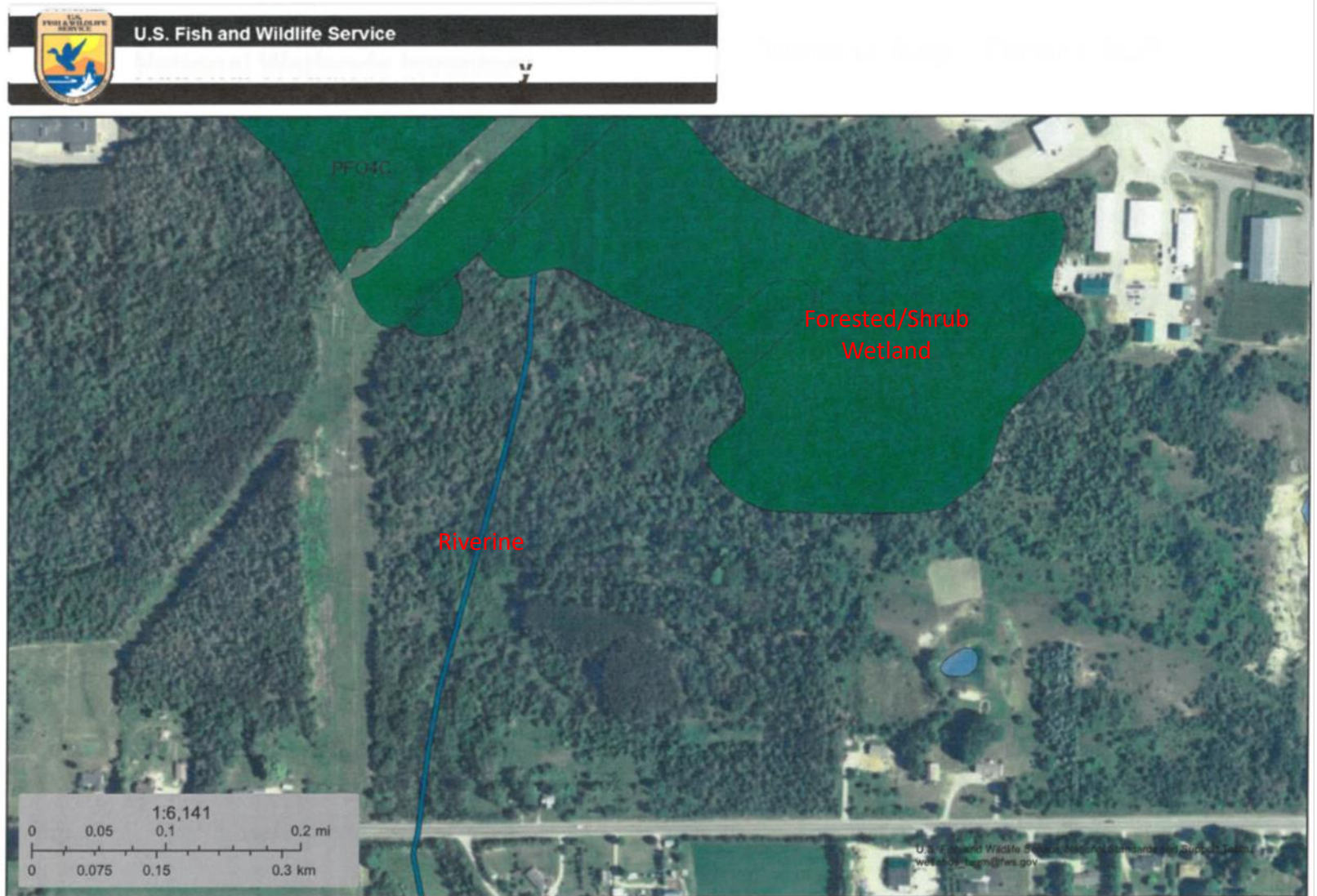
Truck and Driver Safety Measures

- Established driver safety program.
- Drive along process as part of hiring procedures to adequately assess driver experience and qualifications.
- Daily driver inspection of truck and trailer to assure mechanical safety.
- Employee motor vehicle driving records are reviewed and assessed annually.
- Employee random drug testing program completed four times a year.
- Safety committee made up of drivers and other field personnel that meet every month to review truck and other safety measures.
- Mechanic shop operations with over 40 employees dedicated to maintaining the service and safety of our trucks and equipment.
- In Fall 2017/Winter 2018 we are installing a GPS/Telematics system to identify driving path level detail of truck speed, path of travel and other data relevant to monitoring truck behavior in real time. A full time employee monitor and further develop safe driver behaviors.

Environmental Impact Concerns

- Soil erosion and drainage – will comply with all measures determined necessary by Emmet County Soil Erosion.
- Wildlife
- Air pollution
- Water pollution
- Noise

US Fish and Wildlife Wetland Map



Wetland Considerations

- **Forested Emergent Wetland** – defined as forested swamp or wetland shrub bog on the map. We expect to have this area professionally delineated and staked to visually identify this area. We do not expect to develop any wetland areas as part of activities requested under this special use permit.
- **Riverine** – defined as river or stream channel. It appears to be a seasonal drainage course. A wetland specialist will determine whether this is regulated or not. If it is regulated we will take appropriate measures to protect it. If it is determined to be unregulated, we will allow for continued surface water drainage across the property.

Access to Fochtman Industrial Park

- The site includes an easement across Kendall Electric's property to access Fochtman Industrial Park.
- This area is identified as Wetland on the US Fish and Wildlife Service Wetlands Map.
- MDEQ approval is required to construct a road through wetland.
- One of the criteria used by the MDEQ to determine whether it is appropriate to disturb wetland areas is if "no feasible and prudent alternatives" are available. The site fails this test because the proposed traffic calming measures and truck routes are reasonable and prudent measures to address traffic safety; rendering this easement unusable.

Wildlife Impact

- We do not intend to disturb wetland areas regulated by the MDEQ which have plants and wet areas that provide habitat and feeding areas for wildlife.
- 50 feet of natural vegetation that exists in the setback area encompassing the entire perimeter of the site will be retained.
- Finished aggregate production activity will be six (6) weeks annually.
- General operating hours will be Monday to Friday 7am to 7pm and Saturdays 7 am to 5 pm.

Air Impact

- 50 feet of natural vegetation that exists in the setback area encompassing the entire perimeter of the site will be retained.
- Processing areas are approximately 1,000 feet away from the nearest residence.
- Dust and silica control measures applied in accordance with our health and safety plans such as:
 - applying dust control to disturbed areas/roads/stockpiles
 - cleaning/sweeping paved areas
 - minimizing speeds on site
 - routinely monitoring silica levels for the site
 - employing a full time person to comply with mine safety and air quality standards of the Mine Safety and Health Administration and Michigan Department of Environmental Quality.
- Site and equipment air emissions are monitored and reported to the MDEQ annually.

Silica Awareness

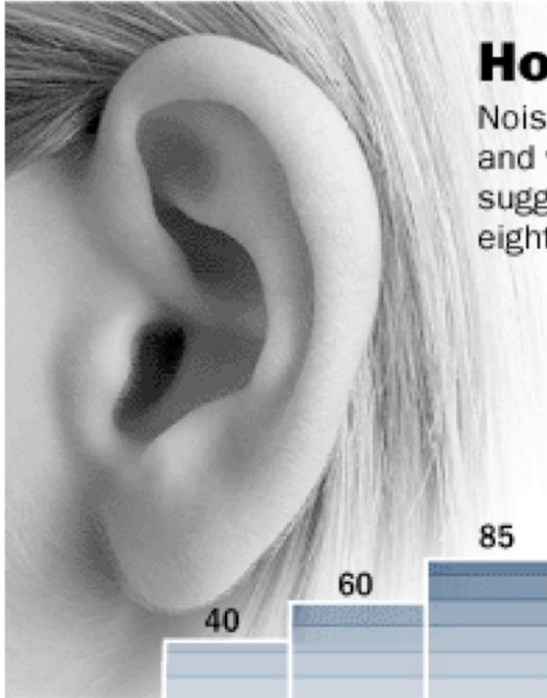
- Crystalline Silica (“Silica”) is a trending topic, mainly because of OSHA’s new rule regarding it that becomes effective for the construction industry on September 23, 2017.
- Silica is a natural component of soil, sand, granite and other minerals; quartz is the most common form. It is also found in shingles, concrete, paint, abrasives, mortar and plaster.
- OSHA’s new regulations will require employee exposure to Silica to be limited to fifty (50) micrograms per cubic meter of air over eight (8) hours.
- In June and July 2017, Elmer’s equipped eight (8) employees with testing devices working in sand/gravel operations to measure their exposure to Silica. An independent laboratory determined the highest reading was .0091 micrograms per cubic meter of air.
- The limit set by OSHA is 5,000 times higher than our highest reading.

Water Impact

- As indicated earlier, we currently plan to excavate to bedrock or groundwater, which is a variable depth on the site; currently expected to average twenty (20) feet.
- We do anticipate encountering perched water because of some of the heavy soils intermittent on the site, which we expect will naturally permeate the other soils on the site.
- We engaged Otwell Mawby to do a hydrogeological evaluation of the site to determine the impact of our proposed activity to water quality in the area. Full evaluation provided to Planning Commission.
 - Otwell Mawby concluded that our proposed activity **would not** affect groundwater quality for any wells, specifically including those on Pickerel Lake Road and those to the North along US31.
 - Otwell Mawby also addressed actions necessary to address the drainage course flowing through the property which will be completed prior to work on the site.

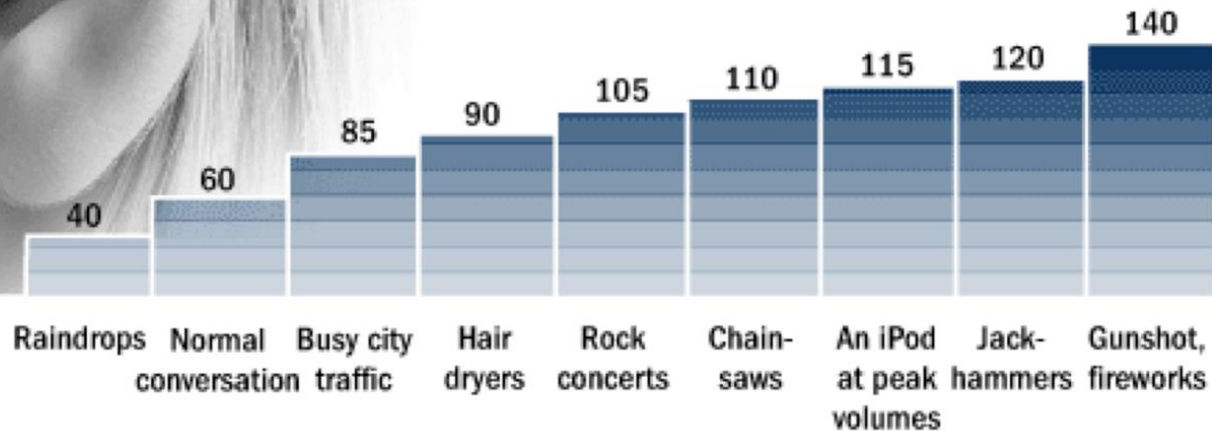
Noise Impact

PictureQuest



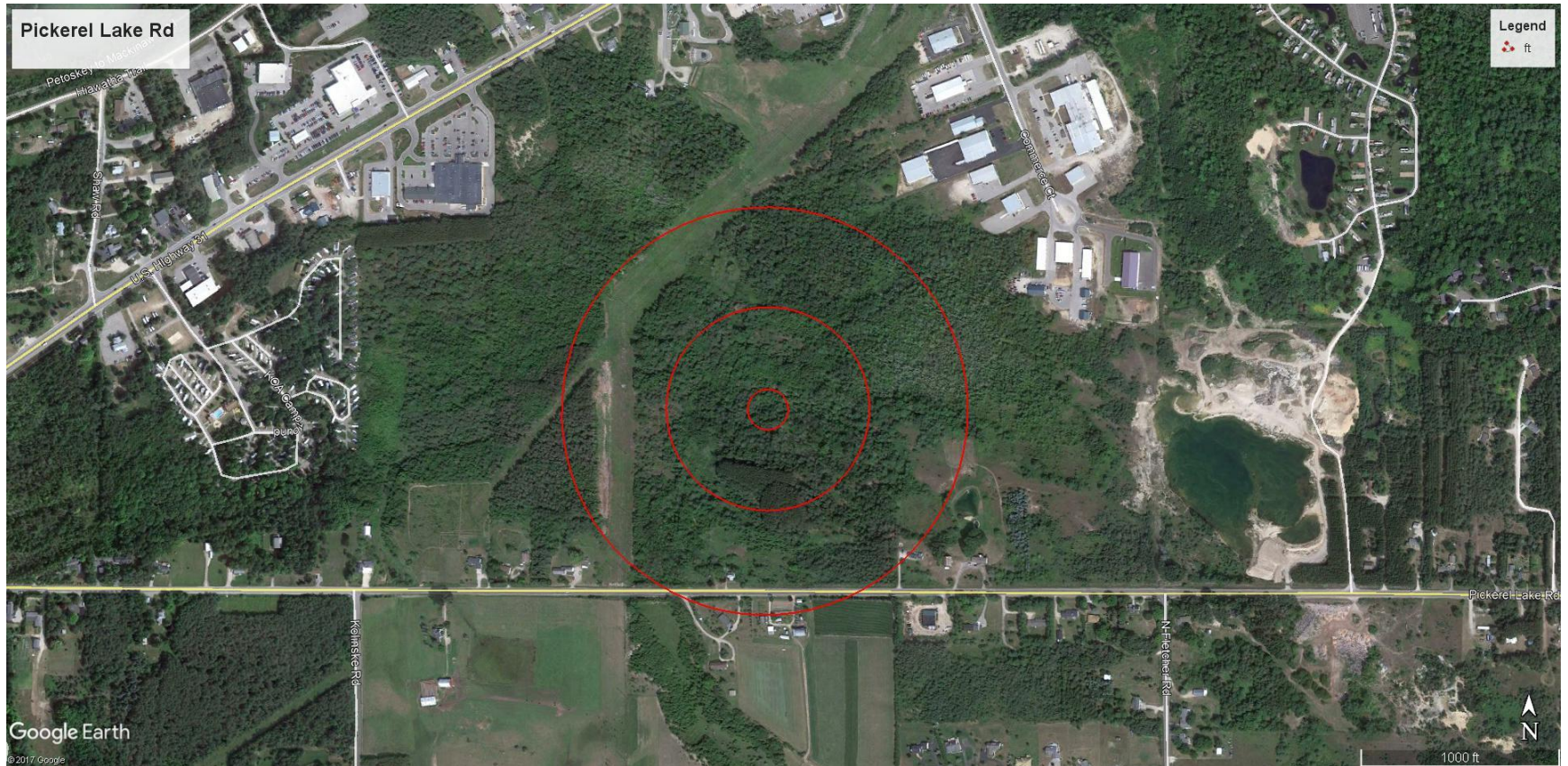
How Loud Is Too Loud?

Noise-induced hearing damage is related to the duration and volume of exposure. Government research suggests the safe exposure limit is 85 decibels for eight hours a day. Some common decibel levels:



Sources: dangerousdecibels.org; WSJ research

Noise Evaluation Site Map



Outside Ring -1,000 feet; Middle Ring – 500 feet; Inside Ring – 100 feet

Noise Volumes of Gravel Plant

- We measured the noise volumes of our portable gravel plant and construction equipment operating on August 1, 2017 at a customer's gravel pit at multiple distance intervals. The gravel pit is flat and has no screening.
 - 100 feet: 77 to 78 decibels. This is comparable to an enclosed cab tractor.
 - 500 feet (MSHA minimum distance from residences): 59 to 64 decibels. This is comparable to normal conversation.
 - 1,000 feet (expected actual distance from residences): 45 to 64 decibels. This is comparable to raindrops and normal conversation.
- We expect the screening at the proposed site will further reduce these levels during the 6 week production window.
- The levels measured are well below safe levels or those deemed to affect enjoyment of properties in residential areas.
- Short video of decibel determination to follow.

Reclamation Plan

- Reclamation plan will conform to Emmet County Soil and Erosion permit requirements.
- Reclamation will be progressive, as reasonable.
- Two (2) inches of topsoil naturally occurring on site will remain to perform all necessary reclamation work to support native vegetation.
- Organic materials removed from jobsites will also be used to reclaim site to minimize the elevation change of the site.
- No reclaimed final slope shall exceed a slope angle of one (1) foot vertical to three (3) foot horizontal.
- No standing water is anticipated; if any exists during phased excavations that would cause a hazardous situation, that area, where reasonable, would be temporarily fenced off or filled with excess soil.
- Provide \$40,000 letter of credit to secure reclamation of the twenty (20) acre extraction area of the current site plan.

