

## CHAPTER 21

### EARTH REMOVAL, QUARRYING, MINING AND RELATED MINERAL EXTRACTION ACTIVITIES

**SECTION 21.01 INTENT AND PURPOSE, EXCEPTIONS** Earth Removal, Quarrying, Gravel Processing, Mining and Related Mineral Extraction Businesses. Prior to the approval by the Planning Commission of a special exception use for earth removal, quarrying, gravel processing, mining and related mineral extraction businesses in any area of the Township, said commission shall be satisfied that the following conditions and limitation are, or shall be, strictly complied with, in addition to any other requirements contained in the Township zoning ordinance or in any other Township ordinance controlling such operation. These provisions do not apply to grading operations that do not result in material being taken off premises.

Earth removal/operations (material carried off site) carried out directly by land owners for the purposes of preparing their land for cultivation or in preparation of building development may be exempted from these provisions provided that all of the following conditions are met.

- (1) No area is created which fills with water, unless it is a farm watering pond or private recreational pond with bank gradients of no more than one (1) foot vertical to three (3) feet horizontal.
- (2) Operations are not commercial in nature and do not involve on-site processing such as crushing, washing or grinding.
- (3) The area of the removal operation is limited to a maximum of one (1) acre in size or in the case of field grading and building development, to an area roughly equivalent in size to the site being prepared for development or cultivation.
- (4) The duration of operation is limited to a continuous twelve (12) month period of time.
- (5) The reclamation requirements of Section 21.05b shall still apply.

Any operation that exceeds the above limits will be required to receive a special use permit under this Chapter and Chapter 15. After preliminary review of applications for operations exceeding or likely to exceed one or more of the above limits, the Planning Commission may find such operations to be minor in nature and may waive, if found to be unnecessary, one or more of the application and plan content requirements itemized under Section 21.08.

#### **SECTION 21.02 LOCATION.**

- (a) All such operations shall be located on a primary road, as defined by the County, for ingress and egress thereto, or on a road, which does not create traffic through an area developed primarily for residential purposes. Where necessary, said Commission may require the applicant to construct and/or improve a road to accommodate the truck travel necessitated by the operations as a condition to such operations, and for the purpose of routing traffic around residential areas and preventing the breaking up of existing roads which are not "all weather" roads.
- (b) Sufficient setbacks shall be provided from all property lines and public highways to assure adequate lateral support for adjacent public and private property. No such excavation operation shall be permitted closer than one hundred fifty (150) feet to interior boundary lines of the property except that the Planning Commission may reduce such setback to fifty (50) feet if reclamation of the land is promptly effected to increase the

setback to at least one hundred fifty (150) feet. Such reduction shall be in accordance with the reclamation plan approved by the Commission and adequate lateral support shall be maintained at all times.

- (c) No such excavation operation shall be permitted within fifty (50) feet of an adjoining public right-of-way except for the lowering of land adjoining said rights-of-way to the grade level of said rights-of-way. Such excavation businesses shall at no time be permitted where adequate lateral support for the maintenance of adjoining lands is not maintained.
- (d) A processing plant and its accessory structures shall not be located closer than two hundred fifty (250) feet from the interior property lines and adjoining public rights-of-way and shall, where practicable, be located at a lower level than the surrounding terrain to lessen visual and noise impact. In addition, the foregoing shall apply to the digging or excavating apparatus and to the stockpiling or loading of materials and to the location of transportation equipment.
- (e) No such excavation operation shall be located within one hundred (100) feet of the banks of any stream or waterway unless previously approved, in writing, by the Michigan Water Resources Commission, or such other state commission having jurisdiction thereof. No such mining operations shall interfere with the natural established flow of surface waters to the detriment or damage of adjoining public or private properties.

**SECTION 21.03 SIGHT BARRIERS.** Sight barriers shall be provided along all boundaries of the site, which lack natural screening conditions through existing contours or evergreen growth. Such barriers shall consist of one or more of the following:

- (a) Earth berms constructed to a height of six (6) feet above the mean elevation of the centerline of the adjacent public highway or six (6) feet above the general level of terrain along interior property lines, as the case may be. Such berms shall have slopes that are not in excess of one foot vertical to three feet horizontal and shall be planted with grass, trees or shrubs.
- (b) Plantings of evergreen trees or shrubbery in rows parallel to the boundaries of the property, not less than four (4) feet in height at the time of planting and which grow to not less than six (6) feet in height at maturity and sufficiently spaced to provide effective sight barriers when six (6) feet in height.
- (c) Masonry walls or attractive solid fences made of uniform new materials, constructed to a height of not less than six (6) feet and maintained in good repair.

**SECTION 21.04 NUISANCE ABATEMENT**

- (a) Noise and vibration shall be minimized in their effect upon adjacent properties by the utilization of modern equipment designed to accomplish such minimization and by the proper use of berms, walls, and natural planting screens. All equipment shall be maintained and operated in such a manner so as to eliminate, as far as practicable, excessive noise and vibrations which are not necessary in the operation of such equipment.
- (b) Air pollution in the form of dust and dirt shall also be kept to a minimum by the use of modern equipment and methods of operation designed to avoid any excessive dust or dirt or other air pollution injurious or substantially annoying to adjoining property owners.

Interior and adjoining roads used in the operations shall have their surface treated to minimize any such nuisance.

- (c) Hours. The operation shall be restricted to the daylight hours between dawn and dusk.
- (d) Fencing. All dangerous excavations, pits, pond areas, banks or slopes shall be fenced and posted with signs around the perimeter thereof and maintained to prevent injury to children or others, and shall be eliminated as expeditiously as possible.

#### **SECTION 21.05 RECLAMATION OF MINED AREAS**

- (a) Reclamation and rehabilitation of mined areas shall be accomplished as soon as practicable following the mining or excavation of an area. Rehabilitation and reclamation shall be commenced immediately upon the termination of the mining or excavation operations in any area consisting of one half acre or more unless part of a larger operation where the Planning Commission has specified the timing and sequencing of reclamation. Substantial completion of reclamation and rehabilitation shall be effected within one year after termination of mining or excavation activity. Inactivity for one 12-month consecutive period shall constitute justification for the Planning Commission to evaluate the operation for the purpose of determining whether the operator has terminated mining activity.
- (b) The following standards shall control reclamation and rehabilitation:
  - (1) All excavation shall be either to a water-producing depth of not less than five (5) feet below the average summer level of water in the excavation, or shall be graded or back-filled with non-noxious, non-flammable and non-combustible solids to insure:
    - (a) That the excavated area shall not collect stagnant water and not permit the same to remain therein; or
    - (b) That the surface of such area which is not permanently submerged is graded or back-filled as necessary to produce a gently rolling surface that will minimize wind and water erosion, and which will be generally compatible with the adjoining land area.
  - (2) The banks of all excavation shall be sloped to the waterline in a water-producing excavation, and to the pit floor in a dry operation at a slope which shall not be steeper than one (1) foot vertical to three (3) feet horizontal.
  - (3) Top soil of a quality equal to that occurring naturally in the area shall be replaced on excavated areas not covered by water, except where streets, beaches, or other planned improvements are to be completed within a one-year period. Where used, top soil shall be applied to a minimum depth of four (4) inches sufficient to support vegetation.
  - (4) Vegetation shall be restored by the appropriate seeding of grasses or the planting of trees and shrubs to establish a permanent vegetative cover on the land surface and to minimize erosion.
  - (5) Upon cessation of mining operations by abandonment or otherwise as determined by the Planning Commission, the operating company, within a reasonable period of time not to exceed 12 months thereafter, shall remove all plant structures, foundations, buildings, stockpiles and equipment, provided that buildings and structures which have a function under the reclamation plan and which can be lawfully used under the requirements of the zoning district in which they will be located under such plan may be retained.

- (c) A performance bond or cash may be required to be furnished to the Township Clerk in an amount as determined by the Planning Commission. Said bond or cash shall be used to guarantee rehabilitation and reclamation of mining the operation. The Planning Commission shall base its decision on whether to require the posting of a bond or cash and the amount of bond or cash to be posted, on the size and extent of the mining operation. Any financing guarantee shall be reviewed annually on or about the anniversary date of the excavation permit for adjustment and compliance with the foregoing requirements by the zoning inspector of the Township and the Township Planning Commission.

#### **SECTION 21.06 SUBMISSION OF OPERATIONAL AND RECLAMATION PLANS**

No earth removal, quarrying, gravel processing, mining and related mineral extraction businesses shall be allowed or commenced until a plan has been submitted to the Planning Commission showing compliance with all of the provisions of this Ordinance or the manner in which compliance will be secured by the applicant. Such plans shall include, among other things, the following:

- (a) A contour map of the tract of land involved in the operations, including dimensions of the same, access thereto abutting public streets, and whether or not the same are "all weather" roads, additional roads, if any, to be constructed, and the location and nature of abutting improvements on adjoining property
- (b) The number of acres and the location of the same proposed to be operated upon within the following 12-month period after commencement of operations.
- (c) The type of mining or processing proposed to be conducted and the nature of the equipment to be used
- (d) The location of the principal processing plant and the distance of any proposed excavation or mining from the boundaries of the site
- (e) Soil tests shall be made around the perimeter of the excavation site in the event excavation or activities are to be conducted closer than one hundred fifty (150) feet from the boundaries of the site, said soil tests shall disclose conditions satisfactory for lateral support of adjacent premises as determined by the an engineer acceptable to the Township. The written consent of the owners of adjoining premises and of the Planning Commission shall be required if mining operations shall be closer than specified in the within Ordinance to the boundaries of the site
- (f) A map or plan disclosing the final grades and elevations to be established following the completion of the mining operations, including the proposed uses then contemplated for the land, future lakes and roads and such other matters as may evidence the bona fide nature of the reclamation and rehabilitation plans and the fact that the land will not be devastated and rendered unusable by the proposed mining activities

#### **SECTION 21.07 HEARING AND REVIEW CRITERIA**

- (a) After receiving an application for the grant of a special exception permit for an earth removal, quarrying, gravel processing, mining, and related mineral extraction business accompanied by the required plans and specifications and permit fees, the Planning Commission shall hold a public hearing upon such application in the same manner preceded by the same notice as set forth in Section 17.06 of this Ordinance. *(Amended 05-08)*

- (b) Following such hearing, said Planning Commission shall grant or deny the application and set forth its reasons for its decision. Such recommendation shall be based upon the criteria set forth within the Ordinance and shall be based, in addition, on a consideration of the following:
- (1) The most advantageous use of the land, resources and property
  - (2) The character of the area in question and its peculiar suitability, if any, for particular uses
  - (3) Conservation of property values, as well as natural resources and the general and appropriate trend and character of development in the subject area
  - (4) The protection and preservation of the general health, safety and welfare of the township
  - (5) The scarcity or value of the minerals sought to be mined as compared with the effect upon the adjacent community of the proposed operations
  - (6) Whether or not the operations were previously in existence prior to the adoption of the text provision concerning the same and the extent and character of such previous operations
  - (7) In making any decision, the Planning Commission shall have the right and authority to impose such additional conditions and safeguards, as it deems necessary for the protection of the health, safety and general welfare of the neighborhood and of the adjoining residents and property owners. It may also limit the length of time that the special exception permit is to be effective and may provide for a periodic review of the proposed operations to ascertain compliance with the conditions and limitations imposed upon the same. It shall be empowered to renew or extend a special exception permit where all standards and conditions are complied with and may revoke or refuse to renew the same where non-compliance exists. No revocation or failure to renew or extend a permit shall release the applicant from the duty of rehabilitation and reclamation of said mined or disturbed area. No permit shall be revoked or not renewed until the operator has been given written notice of any violation forming the basis of such revocation or denial or renewal and not less than 30 days have elapsed to correct the said violation. The Planning Commission shall review all permits annually.
  - (8) The operator shall be required to pay an annual fee to cover the cost of inspections and additional meetings of the Planning Commission as may be established by the Township Board.
  - (9) Liability Insurance shall be a pre-condition to commencement of operations, and maintenance in full force and effect of insurance shall be a pre-condition to the right to continue operations. The applicant shall provide binders for personal injury and property damage insurance for the project to be carried by an insurance company licensed to do business in the State of Michigan during all times which any reclamation is left to be done, and during all times any machinery and/or equipment remains on the site, or any structures, equipment or improvements to be removed remain on the site, said insurance to contain a hold-harmless clause regarding liability of the Township during any reclamation phase.

## **SECTION 21.08 REVIEW PROCEDURES AND REQUIRED INFORMATION.**

Application for the issuance of a permit to operate a mining or soil removal operation under the standards of this Chapter shall be made under the provisions of Chapter 15 Special Land Uses. The site plan content requirements of Chapter 14, Section 14.04 as applicable shall be relied on as the minimum informational requirements for site plans submitted as part of such application. In addition to the content requirements of Section 14.04, the Planning Commission may require the applicant to provide all or a portion of the following additional information and documentation prior to reaching its decision.

- (a) Documentation of Need for the Resource Material. The need for the material being excavated and/or processed shall be quantified and verified so that the Planning Commission can weigh the value of the material being made available against the potential negative impacts of the operation in the proposed location. The types of information may include:
  - (1) A characterization as to the expected service area of the mining operation.
  - (2) The type and quantity of material to be mined, as supported by soil borings.
  - (3) The location, ownership and temporal (short and long term) availability of existing mining operations that produce the same material within the same service area.
  - (4) Projections as to the volume of material that will be needed in the service area as compared to the volume available.
  - (5) A listing of known or existing “local” projects that will be in need of the material or 5 to 10 year projections based on past usage. If possible such estimates and projections should be supported by expert testimony or signed letters from third parties or published reports.
  - (6) Any expert or third party opinions as to the financial or other positive negative impacts on the construction industry if the proposed operation is or is not allowed.
- (b) Existing and Projected Roadway Conditions and Traffic. A written and graphic characterization of the expected haul routes and the proposed access to the site should be presented. This shall include:
  - (1) An identification of expected primary and secondary routes that truck traffic will use when traveling to and from the site.
  - (2) A characterization of the routes including:
    - (a) Types of surface
    - (b) Number of lanes and typical roadway width
    - (c) Typical roadway speeds or speed limits
    - (d) Known or potential trouble spots for heavy truck traffic including street intersections, hills, and curves
    - (e) Number and location of homes and other land uses along the routes including schools, day care operations, churches and businesses.
  - (3) Existing traffic volumes along appropriate segments of the anticipated primary and secondary haul routes.
  - (4) Projected traffic increases by type and route.
  - (5) Characterization of projected truck traffic by size, type and weight of trucks and direction of travel, empty and full on average and extreme daily and average annual basis.

- (6) Expert analysis and testimony as to the adequacy of the routes in general for truck traffic
  - (7) Identification of documented or potential problems such as, inadequate clear vision, roadway width, steep grades, surface condition, maintenance or land use and traffic conflicts
  - (8) Expert analysis and identification of potential solutions to identified or documented problems in the form of roadway improvement, extra maintenance, traffic control devices, use or speed limitations or combinations of the above
- (c) Characterization of the proposed operation and site access in relation to the public street and street right of way
- (1) Indicate the proposed location of proposed access (driveway or driveways) and their width, type of surface and other design features such as surface, deceleration and acceleration tapers, culverts, etc.
  - (2) Indicate minimum site distances.
  - (3) Accurately depict the roadway conditions and width within 500 feet of each access drive including right of way width, roadway elevation and roadway location within the right of way.
  - (4) A written statement from the County Road Commission officials as to whether the proposed access to the site will meet or exceed their standards and if extraction operations or other operations will be allowed to occur within the road right of way, if requested or proposed and under what types of limitations.

The above informational needs are in addition to the information required to address the evaluation of the proposal's on-site operational and reclamation components.