

APPENDIX H

ADDITIONAL REQUIREMENTS FOR SUBDIVISIONS TO BE SERVED BY SEPTIC SYSTEMS

H-1 General

When it is proposed to utilize septic systems for the disposal of sewage, the soils and soil conditions present on the site are extremely important. The purpose of this Appendix H is to specify the requirements which must be met by the owner at the three stages of the Plat review procedure.

H-2 Sketch Plan Stage

At the Sketch Plan stage the owner must submit a Natural Resource Inventory showing the location of the property in question and the types of soils found on that property. The proposed Sketch Plan should take the soil types of the official McHenry County Soil Maps into consideration to reasonably assure the ability to obtain one-half acre of suitable soils in one continuous area of each lot. Suitable soils are considered to be soils that are not specified as critical soils in the Soils Standards Manual for On-Site Wastewater Disposal Systems. Further on-site investigation will be required prior to submission of the Tentative Plat.

H-3 Tentative Plat Stage

When a subdivision is to be served by septic systems, the Tentative Plat shall be prepared in accordance with the following additional requirements and procedures:

- A. Soil mapping based upon on-site determination of soil characteristics shall be conducted to determine soil suitability for septic systems. Soil survey and mapping shall be by a Soil Classifier as defined in Article 3, Definitions. To determine soil suitability for septic systems, the following procedure shall be utilized.
 1. There shall be a sufficient number of soil borings throughout the proposed acreage for platting, so as to allow intensive mapping of soil characteristics and limiting factors related to suitability for septic systems. The mapping and overlay of such characteristics should be of sufficient detail to minimize the potential for inclusions and to determine the existence of at least .50 acre of suitable soils on each proposed lot. There shall be at least one boring on each acre of the proposed subdivision. The location of all borings shall be shown on the soil map overlay.

A 200 foot grid system will be established, and one boring at each grid point shall be performed. In addition, sufficient additional borings shall be completed to adequately identify each soil mapping unit as well as variations within mapping units as far as depth to limiting layer.

2. The McHenry County Health Department shall be notified at least 24 hours before commencement of on-site borings so that the Department may observe the borings and sample procedures, if it desires. Any boring conducted without the Department being notified may not be acceptable.
 3. A map, report and log of each soil series mapped on the site shall be prepared and included in the Soil Classifier's report. Specific boring logs shall be submitted as part of the report in a format as required by the McHenry County Health Department. These reports shall include, at a minimum, soil texture and permeability classifications by depth, along with the depth to any limiting layer.
 4. The date(s) of all field work shall be indicated.
 5. The entire subdivision area shall be mapped showing soil types present with different boundaries considering areas of transition. This mapping shall be coordinated with site topography, shall have lot lines superimposed upon it and shall be of the same scale as the Tentative Plat.
 6. The map shall also depict areas of seasonal high groundwater or other limited layers as determined by the Soil Classifier's observation of the drainage characteristics of the soil. Long-term monitoring of observation wells, approved by the McHenry County Health Department, may be used to supplement this information. Boundaries of the following areas shall be defined:
 - a. Seasonal high groundwater or other limiting layer at less than 18 inches;
 - b. Seasonal high groundwater or other limiting layer at 18 inches to 30 inches;
 - c. Seasonal high groundwater or other limiting layer at 30 inches to 42 inches;
 - d. Seasonal high groundwater or other limiting layer at 42 inches to 60 inches; and
 - e. Seasonal high groundwater or other limiting layer greater than 60 inches.
- B. A detailed map showing the soils present and locations of borings (per H-3-A).
- C. Only soil types depicted on the site soil map and classified as non-critical soils for septic systems may irrefutably be included in the one half acre of soils suitable for septic systems required for each lot.
1. Soils not considered suitable for septic systems shall not be included in the one-half acre of required soils, and in addition, shall be indicated as being restricted for septic systems on the Plat.

2. All areas of filling and/or cutting must be clearly delineated on an engineering plan. It should be known that this may influence septic suitability and additional soil work may be required.
 3. The use of fill and/or cutting of soils is strongly discouraged and usually results in at least as critical if not more critical soil limitations for on-site wastewater systems. The primary controlling factor to be considered is that the natural soils must be unencumbered by a limiting layer within 30 inches of the natural soil surface. Fill can only be used if that criterion is met. In this event, fill would have to be limited to carefully controlled situations, accompanied by detailed engineering. The lower portion, if not all of the sewage disposal system, must be a minimum of 6 inches into natural (undisturbed), uncompacted soils and no deeper than 36 inches from a final grade. At the time, the separation below the trench bottom to the top of the limiting layer shall be maintained as required in Section 4.01, B2 of Article X of the McHenry County Health Department Ordinance.
- D. When the development includes small lot sizes, a uniform location of wells and septic systems shall be shown on the lots to eliminate future conflicts between wells and septic systems.
- E. Septic system restriction lines shall be shown on the Tentative Plat in conjunction with all drainage easements, detention and retention easements and dry wells, in accordance with the following:
1. Drainage easements must have a 25 foot septic restriction line shown on the Tentative Plat, such line being at least 25 feet from the edge of the drainage easement. If the drainage easement is for pipe or conduit, the restriction line shall be 15 feet from the pipe. The portrayal shall clearly indicate which side of the line is restricted.
 2. Pond-type retention facilities must have a septic restriction line shown on the Tentative Plat at least 50 feet from the maximum perimeter of the pond, at high water level (100 year event).
 3. Dry retention basins and dry wells must have a septic restriction line at least 25 feet from the easement protecting the structure or detention area. There shall be a 200 feet well restriction line from all dry wells.
- F. The developer must prove to the satisfaction of the Village Engineer and McHenry County Health Department that each lot on the Tentative Plat has at least one-half acre of suitable soil in a continuous are and of usable size and configuration. This one-half acre is exclusive of all easements (i.e. Drainage, road construction, utility, etc.).

- G. The signature of the Soil Classifier by whom the soil mapping was done and the report prepared, must be affixed to both the report and the Tentative Plat.

H-4 Final Plat Stage

When a subdivision is to be served by septic systems, all septic system requirements of the Tentative Plat stage must continue to be met at the Final Plat stage. The following requirements must be met during preparation of the Final Plat and Engineering Drawings:

- A. All areas restricted for septic systems and wells must be designated on the Final Plat.
- B. Where site specific engineering has been approved, the Engineering Plans must include details of such engineering.

H-5 Extensive Areas of Flood Hazard, Wetlands or Critical Soils - Special Procedures

If an extensive area of flood hazard, wetlands or critical soils make it impossible to obtain the required one-half acre continuous piece of land without restrictions for septic systems on one or more lots, the procedures of this subsection may be followed.

- A. Land designed as flood hazard is not acceptable for the installation of a septic system, and cannot be included as part of the one-half acre of land suitable for septic systems required on every lot. Consideration of any alterations of such areas is discouraged, and any proposals for changes must be handled on a case by case basis. ²
- B. Removal of native soils and replacement with suitable soils shall be considered a "made-land" situation, and is not usually acceptable for on-site wastewater disposal purposes. Any such consideration of this approach should be only after consultation with the McHenry County Health Department prior to preparing any plans. In addition to the normal soils evaluation in areas of made lands, the following factors will also influence soil suitability: length of time fill has been in place, degree of compaction, stratification of soil texture, re-establishment of soil structure and depth, predictable extent of materials and integrity of the fill-natural soil interface.
- C. Certain soils are designated as "critical" for septic systems due to high groundwater elevation. The use of an extensive system of curtain drains or tiling in such a situation will not be permitted due to possible problems with maintenance in the future and the uncertainty as to whether curtain drains are capable of affecting groundwater elevation except in specific situations.
- D. Soil materials with very rapid permeability, particularly coarse sand and gravels, are classified as very severe by the USDA, Soil Conservation Service for on-site wastewater systems because of the potential for groundwater contamination. This potential is of special concern where numerous systems are developed along the same groundwater flow path(s). Reduced density of on-site systems in such situations is the common control technique. Special consideration shall be given to the hydrology

of the area under consideration and the existing, as well as potential future density of development in the area.

- E. It is suggested that all proposals for site specific engineering designs be discussed with the McHenry County Health Department before detailed plans are prepared.

² A Conditional Use Permit to fill in flood hazard land is based partly on the provisions of "compensatory storage." In brief, this means that for every cubic yard of fill added to an area of flood hazard, one cubic yard of material must be removed from a nearby area of the same Flood Hazard area so there is no net loss of flood storage volume.