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SEWAGE DISPOSAL REGULATIONS
FOR
KENT COUNTY, MICHIGAN

ARTICLE I – TITLE, PURPOSE, AUTHORITY AND JURISDICTION

101 - TITLE
These Regulations shall be identified by the title “Sewage Disposal Regulations for Kent County, Michigan.”

102 – PURPOSE
These Regulations are hereby adopted for the purposes of protecting public health and safety and the quality of the natural environment, and to prevent the occurrence of public nuisances resulting from improper sewage disposal practices.

103 – AUTHORITY
These Regulations are hereby adopted pursuant to authority conferred upon local health departments by Section 244(1) of the Michigan Public Health Code, Act 368, P.A. 1978, as amended.

104 – JURISDICTION
The responsibility for administration and enforcement of these Regulations shall reside with the Director of the Kent County Health Department.

The Regulations shall be in full force and effect throughout all areas of Kent County, incorporated and unincorporated.

If a provision of these Regulations is found to be in conflict with a provision of any other statutes, rules or requirements, then the more restrictive of such provisions shall apply.

ARTICLE II – DEFINITIONS

201 - GENERAL PROVISIONS
Words, terms, and expressions utilized in these Regulations shall have the meanings defined in this Article. Words, terms, and expressions which are not defined in this Article shall possess their commonly accepted meanings in accordance with standard English usage.
202 - DEFINITIONS – A THROUGH C

202.1 - Absorption Bed
A type of sub-surface absorption system which consists of a square or rectangular excavation not exceeding 1.2 m. (4 ft.) in depth, and which contains a distribution network of several perforated pipes or tubes laid upon a bed of aggregate material of uniform thickness.

202.2 – Aggregate
A particulate material utilized for structural support and sewage effluent dispersal within a soil absorption system, consisting of washed stone, gravel, or similar materials possessing particle sizes meeting the standards for 6-A aggregate utilized by the Kent County Road Commission.

202.3 – Appeal
A formal written request for administrative review of any decision, violation notice, order, citation, action, or failure to act, on the part of the Health Officer, pursuant to the provisions of these Regulations.

202.4 - Board of Health
The Board of Health of the Kent County Health Department, as appointed by the Kent County Board of Commissioners.

202.6 - Building Sewer
The pipe or conduit which conveys untreated sewage from a premise to a septic tank or other sewage treatment device, or to a public sewer.

202.7 – Committee
The Sewage Regulations Technical Advisory Committee, as described in Article IX of these Regulations.

203 - DEFINITIONS D THROUGH N

203.1 – Department
The Kent County Health Department.

203.2 - Dosing Chamber
A tank or receptacle used for the purpose of retaining overflow from a septic tank for controlled discharge to a soil absorption system by means of a pump or siphon device.

203.3 – Drainfield
A type of sub-surface absorption system consisting of a series of interconnected excavated trenches, each of which contains a single perforated pipe or tube laid upon a bed of aggregate material of uniform thickness.

203.4 – Groundwater
Water which exists beneath the ground surface.

203.5 - Groundwater Elevation
The elevation of the upper surface of the zone of highest seasonal groundwater saturation.

203.6 - Health Officer
“Health Officer” means the legally designated Health Officer of Kent County or his/her authorized representative.

203.7 - Infiltrative Surface
That portion of the interface between a soil absorption system and surrounding soils which is intended to conduct sewage effluent away from the absorption system into the surrounding soil matrix.

203.8 – Nuisance
Any condition resulting from the generation, transportation, or disposal of sewage which creates an actual or potential danger to public health and safety; or which results in an aesthetically offensive or objectionable state.

204 - DEFINITIONS – O THROUGH S

204.1 - Percolation Rate
A measurement of the ability of a specific soil to receive, absorb, and transport water, as determined by performance of a percolation test conducted in accordance with standard test procedures specified by the Health Officer.

204.2 – Person
Any individual, group, association, organization, firm, corporation, partnership, or other legally definable entity.

204.3 – Premise
Any house, building, structure, or improvement within or upon which sewage is, or may be, created; and every parcel of land upon which sewage is created.

204.4 - Public Sewer
A system of pipes and conduits for the collection and transportation of sewage, for which the ownership and responsibility for maintenance and operation resides with a governmental entity.

204.5 – Regulations
The Sewage Disposal Regulations for Kent County, Michigan.
204.6 - Seepage Pit (Dry Well)
A type of sub-surface absorption system which typically consists of an underground cavity lined with brick, cement block, or precast concrete; the purpose of which is to receive sewage effluent from a septic tank, and to disperse it into the surrounding soil.

204.7 - Septic Tank
A buried vessel which functions to receive sewage and to partially treat sewage by combined physical separation and anaerobic decomposition, prior to its release to a soil absorption system.

204.8 – Sewage
Any water-transported waste material produced by any toilet, sink, bathtub, shower, drain, or laundry device; and human body waste material in any form, originating within or upon any premise. Excluded from the definition are waste waters from roofs, foundation drains, and water softening devices.

204.9.1 - General Definition
Any device, structure, or facility which functions, either singly, or in combination with other components, to transport, store, treat, or dispose of sewage.

204.9.3 - Conventional Sewage Disposal Facility
A facility which includes a building sewer, one or more septic tanks, a soil absorption system, and all associated connections, fittings, and appurtenances.

204.9.4 - Experimental Disposal Facility
A facility which possesses unique and untested characteristics pertaining to its design, location, or principles of operation; limited use of which is authorized under the provisions of a controlled test program.

205 - DEFINITIONS T – Z

205.1 - Vacant Land Evaluation
A survey conducted by the Health Officer of an undeveloped parcel of land, for the purpose of determining the suitability of such land as a site for installation of a sewage disposal facility meeting the requirements of these Regulations.

205.2 – Variances
Deviations from the provisions and requirements of these Regulations, which are authorized by the Health Officer in specific situations when the strict application of such provisions and requirements would be impossible, unreasonable, or place an excessive burden upon those affected by such action.

205.3 - Water Table
The groundwater elevation, as defined elsewhere in these Regulations.
206 - UNITS OF MEASUREMENT, ABBREVIATIONS AND EQUIVALENTS
Units of measurement referenced in these Regulations, their abbreviations, and their corresponding equivalents in both the Metric and English systems, shall be as specified in Table II-A

<table>
<thead>
<tr>
<th>Metric Unit</th>
<th>English Equivalent</th>
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<tbody>
<tr>
<td>1 Centimeter (cm.)</td>
<td>0.3937 inch (in.)</td>
</tr>
<tr>
<td>1 Meter (m.)</td>
<td>3.28 feet (ft.)</td>
</tr>
<tr>
<td>1 Liter (l.)</td>
<td>0.2642 gallons (gal.)</td>
</tr>
<tr>
<td>2 hectare (ha.)</td>
<td>2.47 acres</td>
</tr>
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ARTICLE III – GENERAL PROVISIONS

301 - PROHIBITED SEWAGE DISPOSAL PRACTICES
It shall be unlawful for any person to discharge or deposit sewage, or to permit sewage to be deposited, upon the ground surface, into a lake, river, stream or ditch, or in any location other than a public sewer or a sewage disposal facility acceptable to the Health Officer.

302 - SEWAGE DISPOSAL FACILITIES REQUIRED
Every premise not served by a public sewer must be served by a sewage disposal facility acceptable to the Health Officer.

Every sewage disposal facility shall be of adequate design and capacity to properly accommodate the quantity and quality of wastewater produced by the premise it serves.

Every sewage disposal facility installed subsequent to the effective date of these Regulations shall conform to the design, location, and construction requirements contained herein.

Sewage disposal facilities in use prior to the effective date of these Regulations may continue in use only if such usage does not create a hazard to public health and safety, a nuisance, or degradation of the natural environment.

303 - SEWAGE DISPOSAL FACILITY OPERATIONS AND MAINTENANCE
Every sewage disposal facility shall be operated and maintained in such a way as to prevent hazards to public health and safety and degradation of the natural environment.
304 - REMOVAL AND DISPOSAL OF MATERIALS FROM SEWAGE DISPOSAL FACILITIES
All waste materials removed from sewage disposal facilities, including sewage, sludge, grease or seepage, shall be handled and disposed of in a manner acceptable to the Health Officer.

Persons who engage in the removal and disposal of such materials shall be licensed in accordance with applicable statutory requirements of the State of Michigan.

305 - REQUIREMENT FOR CONNECTION TO PUBLIC SEWER

305.1 - New Development
Newly constructed premises shall be required to utilize public sewers for wastewater disposal when such public sewers are available and of adequate capacity and when connection to public sewer is consistent with provisions of local codes and ordinances.

305.2 - Existing Development
Existing premises may be required to connect to public sewers by order of the local city, village or township, upon such public sewers becoming available. Existing premises may also be required to connect to available public sewer by the Health Department when continued use of onsite sewage disposal facilities would constitute a hazard to public health and safety or would result in the creation of a nuisance.

306 - ABANDONMENT OF SEWAGE DISPOSAL FACILITIES
Septic tanks, dosing chambers, seepage pits or similar below grade facilities shall be emptied and completely filled with earth, sand or other inert materials when the use of such facilities is to be permanently discontinued, if the Health Officer shall so order.

ARTICLE IV – POWERS AND DUTIES OF THE HEALTH OFFICER

401 - GENERAL PROVISIONS
The Health Officer shall be responsible for regulating the design, installation, operation, and maintenance of all sewage disposal facilities serving single and two-family premises within Kent County. The Health Officer shall also be empowered to exercise regulatory controls over sewage disposal facilities serving other types of premises, when so authorized by other public agencies or officials possessing statutory jurisdiction over sewage disposal facilities serving such premises.

402 - POWER TO ESTABLISH GUIDELINES
The Health Officer may establish guidelines and policies concerning the interpretation of these Regulations. Such guidelines and policies shall be subject to approval of the Board of Commissioners prior to their implementation.

AS AMENDED 2002 - RESOLUTION 3-28-02-34
403 - DUTY TO REVIEW SPECIFIC SEWAGE DISPOSAL FACILITY PLANS
The Health Officer shall review and evaluate plans for all proposed sewage disposal facilities intended to service single and two-family residential premises and other types of sewage disposal facilities for which plan review authority is authorized by other public agencies or officials.

404 - POWER TO CONDUCT INSPECTIONS
The Health Officer shall be empowered to conduct inspections of all properties, public or private, in conjunction with the fulfillment of the duties and responsibilities in these Regulations.

405 - POWER TO ISSUE PERMITS FOR PROPOSED SEWAGE DISPOSAL FACILITIES; POWER TO WITHHOLD PERMITS
The Health Officer shall be empowered to issue permits authorizing the installation of all sewage disposal facilities subject to his jurisdiction.

If the Health Officer determines that the installation of a sewage disposal facility may endanger public health and safety or create a nuisance, he shall be authorized to withhold issuance of a permit for such facility.

406 - POWER TO CONDUCT SURVEYS
The Health Officer shall investigate complaints from persons alleging health of safety hazards, nuisances, or environmental degradation resulting from improper sewage disposal practices or from malfunctioning sewage disposal facilities.

Records of such investigations shall be documented in writing and shall be retained by the department for a reasonable period of time.

408 - Power to Issue Violation Notices; Power to Order Corrective Actions
The Health Officer shall be empowered to issue a notice to any person who violates a provision of these Regulations. Such notice shall contain a description of the violation and shall cite the specific section of the Regulation which applies.

The Health Officer may also order correction of a violation and may specify the nature of corrective action required and a reasonable time limit for such corrective action to be completed. In the case of violations which may present an imminent danger to public health and safety, immediate corrective action may be required.

409 - POWER TO CONDEMN PREMISES AS UNFIT FOR HUMAN OCCUPANCY
The Health Officer shall be empowered to condemn any premise as unfit for human occupancy if such premise is not provided with an acceptable sewage disposal facility. No person shall occupy or offer for occupancy to another person any premise so condemned until the Health Officer has terminated the condemnation order.
410 - POWER TO PURSUE JUDICIAL REMEDIES AND SANCTIONS
The Health Officer shall be empowered to seek judicial remedies and sanctions for any violation of these Regulations when administrative efforts to resolve the violation have proven ineffective, inadequate or are otherwise deemed inappropriate.

ARTICLE V – SEWAGE DISPOSAL FACILITY PERMITS

501 - PERMIT REQUIREMENTS

501.1 - General Requirements
Before any person shall construct, repair, enlarge, or relocate any sewage disposal facility serving any premise within Kent County, he shall first obtain a permit authorizing such action from a Health Officer.

501.2 - Permit Exceptions
The requirement for a sewage disposal facility permit from the Health Officer shall not apply when any of the following circumstances prevail:

a. All sewage will be discharged directly into a public sewer via a system of enclosed piping or conduits from the point of origin.

b. The severed premise falls within a category which subjects it to the legal jurisdiction of an agency of state or federal government, and such agency has not delegated authority for issuance of permits to the Department.

c. The proposed actions relative to the sewage disposal facility are of such a minor nature as to render a permit unnecessary, in the judgment of the Health Officer.

501.3 - Building Construction Permits
No officer or employee of any city, village, or township within Kent County shall issue a construction permit for a new building or structure which must be served by a sewage disposal facility pursuant to these Regulations, unless a permit for such sewage disposal facility has first been obtained by the owner. In the case of an existing building or structure, a city, village, or township official shall notify the Department prior to issuance of a construction permit to ensure that any proposed construction will not adversely affect an existing sewage disposal facility.

502 - APPLICATION FOR PERMITS

502.1 – Eligibility
Applications for sewage disposal facility permits shall be submitted by owners of properties upon which sewage disposal facilities are to be constructed, repaired, enlarged, or relocated, or by other persons acting as authorized agents on behalf of property owners.
502.2 - Application Procedures
Applications for sewage disposal facility permits shall be submitted on forms provided for such purpose by the Health Officer. Applications shall indicate the complete name and address of the property owner and of the prospective owner, if applicable, an accurate description of the property upon which the sewage disposal facility is or will be located, and shall include the supplemental information outlined in Section 502.3. Applications shall be submitted with the required fee, as authorized in accordance with Article XI of these regulations.

502.3 - Supplemental Information Required
Applicants for sewage disposal facility permits shall submit, in addition to the required application form, supplemental facts and information regarding the proposed sewage facility location and design, including:

a. A reasonably accurate representation of the development details for the property upon which the sewage disposal facility is or will be located, including such features as property boundaries, elevations, buildings, wells, surface water bodies, driveways, and other significant details.

b. A reasonably accurate estimate of the daily wastewater flow (average and peak values) to be accommodated by the sewage disposal facility.

c. Complete and reliable information concerning the soil and groundwater elevation characteristics of the sewage disposal facility.

d. Complete details regarding the proposed location, design, elevation, and materials for the sewage disposal facility to be constructed, repaired, enlarged or relocated.

Additional information may be required by the Health Officer if it is determined that such information is necessary to adequately evaluate a permit application.

502.4 - Applicant Responsibilities
It shall be the responsibility of the permit applicant to furnish the Health Officer with all facts, details, designs and information required in these Regulations. Any expenses associated with the provision of such facts, details, designs and information shall be the responsibility of the applicant. The Health Officer may, but shall not be obligated to, provide limited technical advice and assistance to applicants upon request, relative to sewage disposal facility design, location, and construction. The ultimate responsibility for the adequacy of all plans, designs, and completed disposal facilities shall reside with the applicant.

503 - PERMIT ISSUANCE
The Health Officer, following his review of an application for a sewage disposal facility permit, may issue a permit to the applicant authorizing performance of the requested construction, repair, enlargement or relocation. The permit shall describe the nature and extent of work authorized and may contain specific requirements or limitations which the Health Officer deems necessary.
A sewage disposal facility permit shall remain valid for a period of two years from date of issuance, unless an extension is requested from and approved by the Health Officer.

A sewage disposal facility permit shall not be transferable as to permit holder or property location.

**504 - PERMIT DENIALS**

504.1 - Criteria for Permit Denial
The Health Officer may decline to issue a sewage disposal facility permit for any of the following reasons or causes:

a. Incomplete, inaccurate, or false information supplied by the applicant.

b. Failure of the proposed sewage disposal facility design to conform to the requirements of Article VI of these Regulations.

c. Failure of the proposed installation site for the sewage disposal facility to conform to the requirements of Article VI of these Regulations.

d. Failure of the applicant to submit the required application fee.

e. The existence of any facts which give the Health Officer reasonable grounds to believe that issuance of the requested permit would create a nuisance or a hazard to the public health and safety.

504.2 - Notification of Denial
When an application for a sewage disposal facility permit has been denied, the Health Officer shall notify the applicant of such action within five working days, stating the specific reasons for the denial and advising further actions which the applicant may undertake, if any, to secure the requested permit.

**505 - VOIDANCE OF PERMITS**
The Health Officer may declare a previously issued permit for a sewage disposal facility to be null and void, for any of the following reasons or causes:

a. False or inaccurate information supplied by the permit holder.

b. A change in the plans of the permit holder affecting circumstances relative to the sewage disposal facility design, location, or use.

c. Acquisition of new information indicating that the previously approved installation site for the sewage disposal facility does not satisfy the requirements of these Regulations.
506 - INSPECTIONS

506.1 – General
The Health Officer shall be empowered to conduct such inspections as he may deem necessary in connection with the review of applications for sewage disposal facility permits and the construction, repair, enlargement or relocation of such facilities.

506.2 - Final Inspections
All work authorized by a permit issued by the Health Officer shall be subject to a final inspection before such work shall be approved. No sewage disposal facility or component thereof shall be given a final cover, or otherwise rendered inaccessible, until a final inspection has taken place, and the Health Officer has given his approval. The Health Officer shall attempt to respond to a request for a final inspection within two working days, following receipt of such request. Upon completion of a final inspection, the Health Officer shall notify the permit holder of his findings, and shall signify his approval or disapproval. The requirements for a final inspection may be waived by the Health Officer if the adequacy of the completed work can be adequately verified by other means.

507 - FINAL APPROVALS REQUIRED
No person shall utilize a sewage disposal facility which has been constructed, repaired, enlarged, or relocated under authority of a permit issued by the Health Officer unless the Health Officer has signified his approval of such facility. Utilization of any sewage disposal facility which has not received such approval from the Health Officer shall be a violation of these Regulations.

508 - OCCUPANCY PERMITS
No officer or employee of any city, village or township shall issue an occupancy permit for any premise which must be served by a sewage disposal facility pursuant to these Regulations unless the Health Officer has signified his approval of such facility.

ARTICLE VI – SEWAGE DISPOSAL FACILITIES
(Location, Design, Materials & Construction)

601 - LOCATION; CRITERIA FOR SITE APPROVAL

601.1 - General Requirements
A site proposed for the construction, repair, enlargement or relocation of a sewage disposal facility shall be approved by the Health Officer only if the site possesses characteristics which will permit the safe and adequate operation of the facility, will not create a nuisance, and with no adverse effects to human health and safety.

601.2 - Identification of Criteria for Site Approval
The following characteristics as a minimum shall be evaluated by the Director in making a determination as to the acceptability of a proposed sewage disposal facility site:
a. Total usable land area

b. Horizontal isolation

c. Slopes

d. Flooding potential

e. Groundwater elevation

f. Soil permeability and drainage

601.3 - Land Area Requirements
An acceptable site for a sewage disposal facility shall possess sufficient usable horizontal area to allow for the installation of a facility of adequate size and capacity to accommodate all sewage from the premise to be served.

601.4 - Isolation Distance Requirements
An acceptable site for a sewage disposal facility shall provide for horizontal isolation of the facility, and all components thereof, from other structures, objects, boundaries, or natural features in accordance with the minimum distances specified in Table VI – A.

<table>
<thead>
<tr>
<th>Minimum Distant to</th>
<th>Building Sewer</th>
<th>Septic or Dosing Tank</th>
<th>Drainfield of Absorption Bed</th>
<th>Seepage Pit</th>
<th>Other Compon.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement Wall</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td>7.5 m. (25 ft.)</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Property Boundary</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Groundwater Drainage Pipe (Footing Drain)</td>
<td>7.5 m (3) (25 ft.)</td>
<td>7.5 m (3) (25 ft.)</td>
<td></td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Lake, Stream or River</td>
<td>15 m. (50 ft.)</td>
<td>15 m. (50 ft.)</td>
<td>30.5 m (100 ft.)</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Drop-off Slope &lt;45°</td>
<td>3 m. (10 ft.)</td>
<td>7.5 m (25 ft.)</td>
<td>7.5 m (25 ft.)</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Potable Water Wells</td>
<td>15 m. (50 ft.)</td>
<td>15 m. (50 ft.)</td>
<td>23 m. (75 ft.)</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Water Supply Lines</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>Swimming Pools</td>
<td>------</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td>3 m. (10 ft.)</td>
<td>(4)</td>
</tr>
<tr>
<td>---------------</td>
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</table>

1. If sewer materials and construction comply with standards of Michigan Department of Public Health.
2. 23 m. (75 ft.) if a Type II-B Water Supply.
3. 30.5 m. (100) if a commercial, industrial or multi-family premise.
4. Minimum isolation as established by Health Officer.

601.5 - Slope Requirements
An acceptable site for a sewage disposal facility shall not possess slope conditions exceeding 20 degrees (22.2%) from a horizontal plane. Grading or filling of a site to achieve acceptable slope conditions may be permitted by the Health Officer.

601.6 - Flooding Limitations
An acceptable for a sewage disposal facility shall not be subject to surface flooding at a frequency exceeding once per ten-year period, as determined by credible statistical projections or historical evidence.

601.7 - Groundwater Evaluation Requirements

601.7.1 - General Provisions
The water table beneath a specific property location shall not at any time, rise to an elevation closer than 0.610 meters (2.0 feet) to the natural ground surface, in order for such location to be considered acceptable for installation of a sewage disposal facility. A completed soil absorption system or device shall satisfy the groundwater isolation requirements contained in Section 604.2.5.

601.7.2 - Groundwater Elevation Determinations
The elevation of the highest seasonal groundwater table may be established by any or all of the following methods:

a. Physical measurements.

b. Physical examination of soils (by a person trained in soil science) for characteristics indicative of intermittent saturation.

c. Other verifiable evidence and information acceptable to the director.

601.7.3 - Site Modifications
Guidelines concerning the nature and extent of site modifications which may be permitted overcome limitations posed by high water table conditions may be prepared by the Health Officer. Such guidelines shall be subject to the approval of the Kent County Board of Health prior to their implementation.
601.8 - Soil Permeability and Drainage Requirements.

601.8.1 - General Provisions
An acceptable sewage disposal facility site shall possess soils which are of sufficient quantity and permeability to absorb all sewage effluent to be discharged upon such site and to insure its confinement beneath the ground surface at all times.

601.8.2 - Minimum Acceptable Permeability
Soils to be utilized for the subsurface absorption of sewage effluent shall possess a stabilized percolation rate equal to, or less than, 23.5 minutes per centimeter (60 minutes per inch). Soils of acceptable permeability shall extend to a depth of at least 1.2 meters (4.0 ft.) beneath the lowest elevation of the proposed soil absorption device or facility.

601.8.3 - Determinations of Soil Permeability
Determinations of soil permeability may be made by any one, or combination of, the following methods:

a. Physical observations of soil texture, structure, and coloration by persons trained in soil science.

b. Percolation rate tests performed in accordance with standard procedures established by the Health Officer, reviewed by the Sewage Regulations Technical Advisory Committee established in Article IX of these Regulations, and approved by the Kent County Board of Health.

c. Sieve analysis, to determine soil texture.

d. Review of applicable United States Department of Agriculture Soil conservation Service soil maps, with corresponding interpretive information.

In the event of inconclusive, inconsistent, or disputed findings concerning soil permeability as determined by the previously cited methods, the Health Officer shall be empowered to exercise his judgment concerning the permeability of the soils in question.

601.8.4 - Site Modifications
Site modifications, such as cutting, grading or filling may be permitted in some cases for the purpose of overcoming soil permeability limitations of natural soils. Limits on the nature and extent of allowable modifications may be prescribed in guidelines prepared by the Health Officer, reviewed by the Sewage Regulations Technical Advisory Committee authorized in Article IX of these Regulations, and approved by the Kent County Board of Health. Proposals for modifications inconsistent with approved guidelines may be rejected.
692 - BUILDING SEWERS

602.1 - General Requirements
A building sewer shall be of a material possessing physical properties equivalent or superior to schedule 40 polyvinyl chloride pipes. A building sewer shall have a minimum internal diameter of 10.2 centimeters (4 inches), and shall extend in a straight line, if practical, between the premise served and a sewage disposal facility. Short-radius 90° bends shall not be permitted in a building sewer.

602.2 – Slope
A building sewer shall have a minimum slope of 2%, or 2 centimeters per meter (1/4 inch per foot). Building sewers with extreme slopes may be required by the Health Officer to be equipped with velocity-reduction devices ahead of connections to sewage disposal facilities.

602.3 – Cleanouts
A building sewer shall be equipped with at least one readily accessible cleanout fitting per each 30.5 meters (100 feet) of length.

603 - SEPTIC TANKS

603.1 - General Provisions

603.1.1 - Influent Requirements
All sewage generated by any premise shall be discharged into a septic tank prior to being discharged to any soil absorption device or facility. Wastewater from roofs, parking areas, footing drains, or water conditioning devices shall not be discharged into any septic tank.

603.1.2 - Multiple Septic Tanks Required
At least two septic tanks, connected in series, shall be required for every new sewage disposal facility. The combined volume of such tanks shall equal or exceed the minimums specified in Section 603.4 of these Regulations. The first tank of each series shall possess a capacity equal to at least 50% of the total required volume for the facility.

603.1.3 - Existing Septic Tanks
When repairs are made to an existing sewage disposal facility, existing septic tanks which are part of such a facility, and which do not meet the standards contained these Regulations may remain in service without modification. This provision shall apply only if the Health Officer determines that such existing tanks are capable of performing their intended function in an acceptable manner and that no dangers to human health and safety, nuisances or degradation of the natural environment will result from their continued usage.

603.2 - Location
603.2.1 - General Provisions
No septic tank shall be installed in any location which renders it inaccessible for purposes of cleaning and maintenance. A septic tank shall be isolated from other structures, objects, boundaries, or natural features in accordance with the isolation requirements specified in Table VI –A of these Regulations.

603.2.2 - Relationships to Buildings, Parking or Traffic Areas
No septic tanks shall be installed under any buildings, driveway, road, or parking area; provided that the Health Officer may permit a septic tank to be installed in any location which may subject it to excessive mechanical stresses if it is reinforced in a manner acceptable to the Health Officer.

603.2.3 - Relationships to Served Premises
Whenever practical, septic tanks shall be installed on the same side of the served premise as that through which the building sewer is connected to the premise.

603.2.4 - Septic Tank Depth
The top of a septic tank shall not be buried deeper than 0.5 meters (20 inches) beneath the finished ground surface unless a riser is provided above the access opening at the outlet end of the septic tank. The top of a riser, when installed, shall not be buried deeper than 30.5 centimeters (1.0 feet) from the finished ground surface. A riser shall be equipped with a hatch or cover of reinforced concrete, or other material of equivalent properties.

603.3 – Materials
A septic tank shall be constructed of sound and durable materials not subject to excessive corrosion or decay, and structurally capable of supporting the stresses to which it will be subjected. Such materials shall not permit water flow from surrounding soils into the septic tank. Acceptable materials may include reinforced concrete, cement blocks or bricks (with proper sealants), or other materials approved by the Health Officer.

603.4 - Capacities

603.4.1 - Single or Two-Family Residential Premises
Minimum total septic tank capacities for single and two family residential premises shall be based upon the number of bedrooms present in accordance with Table VI –B.

<table>
<thead>
<tr>
<th>Number of Bedrooms</th>
<th>Minimum Required Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or Less</td>
<td>5,680 Liters (1,500 Gallons)</td>
</tr>
<tr>
<td>4*</td>
<td>6,630 Liters (1,750 Gallons)</td>
</tr>
</tbody>
</table>

* For additional bedrooms beyond 4, add 948 Liters (250 Gallons) of total capacity per each.
603.4.2 - Commercial, Industrial & Multiple Residential Premises
Minimum total septic tank capacities for commercial, industrial, and multiple-residential premises shall be determined on the basis of actual or calculated daily sewage flows. For sewage flows of up to 3,790 liters (1,000 gallons) per day, the minimum required total septic tank capacity shall be 5,680 liters (1,500 gallons). For sewage flows exceeding 3,790 liters (1,000 gallons) per day, the minimum required total septic tank capacity shall be computed utilizing the following formula:

\[ C = 3,790 + 0.75 \times Q \]

Where:

\[ C = \text{Minimum required total septic capacity, in liters.} \]
\[ Q = \text{Daily sewage flow, in liters.} \]

603.5 - Internal Dimensions & Relationships
The distance from the bottom of a septic tank outlet to the floor of a septic tank shall not be less than 1.2 meters (4.0 feet). The length of a septic tank shall not be less than 1.5 meters (5.0 feet). The width of a septic tank shall not be less than 0.6 meters (2.0 feet). A septic tank shall provide an air space having a volume of at least ten percent of the liquid capacity of the tank. A minimum clearance of at least 23 centimeters (9 inches) shall be provided between the maximum liquid level of the tank and the tank top or cover.

603.6 - Inlets

603.6.1 - Minimum Diameter
The inlet connection to a septic tank shall not be less than 10 centimeters (4 inches) inside diameter.

603.6.2 – Elevations
The bottom of an inlet connection to a septic tank shall be at least 7.6 centimeters (3.0 inches) above the maximum liquid level of the tank.

603.6.3 - Tees or Baffles
Inlet tees or baffles, if provided, shall be designed and installed so as to permit the venting of gases from the septic tank to the building sewer.

603.6.4 – Location
The inlet connections shall be located at the end of the septic tank opposite the outlet connection.

603.7 - Outlets
603.7.1 - Minimum Diameter
The outlet opening in a septic tank shall not be less than 10 centimeters (4 inches) in diameter.

603.7.2 - Tees and Baffles
A tee or baffle device shall be required to be installed on the outlet of a septic tank. Such a tee or baffle shall extend to a depth of at least 40% of the distance from the maximum liquid level to the bottom of the tank. A tee or baffle shall be vented at its point of highest elevation within the tank. A tee or baffle shall have a continuous interior minimum dimension of no less than 10 centimeters (4 inches). A tee or baffle shall be securely mounted to the tank outlet in such a manner as to prevent leakage or dislodgment.

603.7.3 - Connection to Soil Absorption System
Piping or tubing installed between a septic tank and a soil absorption system shall be of sufficient strength to prevent sagging, deformation or collapse.

603.8 - Access for Inspection and Cleaning
A septic tank shall be provided with one or more secured access openings on its top surface to provide for periodic inspection, cleaning, or repair. If a single access opening is provided, it shall be located at the outlet end of the septic tank, immediately above the outlet tee or baffle. Access openings shall have a minimum dimension of 51 centimeters (20 inches). Hatches or covers used to secure access openings shall be equipped with permanent handles and shall be constructed of reinforced concrete or other material of equivalent properties.

604 - SOIL ABSORPTION SYSTEMS

604.1 - General Requirements
Sewage from any septic tank or similar device which releases partially treated sewage effluent shall be discharged into a soil absorption system or device designed to distribute and confine such effluent beneath the surface of the ground.

604.2 - Location Requirements

604.2.1 - General Requirements
A soil absorption system or device shall be installed in such a location as to maximize its potential for long-term satisfactory operation.

604.2.2 - Isolation Requirements
A soil absorption system or device shall be isolated from other structures, objects, boundaries, or natural features in accordance with the distances specified in Table VI – A of these Regulations.

604.2.3 - Relationship to Buildings, Roads, Driveways & Parking Areas
A soil absorption system or device shall not be installed beneath any building, road, driveway, or parking area or in any other location which may subject it to damage from vehicular traffic.
604.2.4 - Relationship to Floodplains; Surface Drainage Pathways
A soil absorption system or device shall not be installed in any location subject to periodic flooding or frequent surface run-off due to precipitation.

604.2.5 - Depth to Groundwater
The lowest point of any soil absorption system or device shall be isolated a minimum vertical distance of 1.2 meters (4.0 feet) above the level of the highest seasonal water table elevation.

604.2.6 - Depth of Impermeable Soils or Underlying Materials
The lowest point of any soil absorption system or device shall be isolated a minimum vertical distance of 1.2 meters (4.0 feet) above an impermeable soil layer or other material of an impermeable nature.

604.2.7 - Reserve Area
A soil absorption system or device shall be located in such a manner as to provide sufficient area for installation of a future system or device of equivalent capacity, if sufficient area is available.

604.3 - Material Requirements

604.3.1 - Distribution Piping or Tubing
Distribution piping or tubing materials utilized in soil absorption systems shall conform to the criteria in the then current edition of “Michigan Standards for Certification and Utilization of Perforated Plastic Tubing for Drainfields,” as adopted by the Michigan Department of Public Health. Other materials may be utilized subject to approval of the Health Officer.

604.3.2 - Drainstone and Aggregate
Materials utilized for drainstone or aggregate in a soil absorption system shall possess physical properties and characteristics equivalent to washed 6-A aggregate, in accordance with specifications utilized by the Kent County Road Commission.

604.3.3 – Fittings
Fittings and connections shall be of a material, design and size compatible with the piping or tubing to which they are attached.

604.3.4 - Drainstone & Aggregate Cover
Materials utilized to protect against infiltration of earth or soil into completed soil absorption systems, if provided, shall be no thicker than necessary. Acceptable materials shall include untreated building paper, newspaper, hay, straw, or synthetic fabric materials intended for use in such applications.
604.4 - Construction Requirements, General

604.4.1 - Protection of Infiltrative Surfaces
No soil absorption system may be installed in soils having significant amounts of slit or clay when such soils are in a wet or saturated condition. Precautions shall be taken to minimize the smearing or sealing of infiltrative surfaces caused by excavation, machinery movement, or walking.

604.4.2 - Fill Materials
No soil absorption system shall be installed in any fill material which has not achieved a stabilized condition, either by natural settling or mechanical compaction.

604.4.3 - Effluent Distribution
Every soil absorption system shall be designed in such a way as to maximize the even distribution of sewage effluent throughout all absorptive surfaces of the system. Distribution piping shall be interconnected to insure even distribution of effluent. If even distribution of effluent is impractical or impossible to achieve via gravity flow, provisions for mechanical dosing of effluent via pumps or siphons may be required.

604.4.4 - Design Selection Criteria
Soil absorption systems which provide for uniform distribution of sewage effluent at shallow depths shall be installed whenever practical. Preferred systems shall include trench-style drainfields and absorption bed (area-excavation) installations. Seepage pits (dry wells) shall be permitted only if installation of drainfields or absorption beds are not feasible, due to limited area considerations, or due to excessive depths of impermeable soils overlying soils of acceptable permeability.

604.5 - Infiltrative Area Requirements

604.5.1 - General Provisions
A soil absorption system shall provide sufficient total infiltrative area to provide for the confinement of all sewage beneath the ground surface at all times. Infiltrative area requirements shall be calculated based upon the quantity of sewage flow from the premise served and the absorptive characteristics of underlying soils. Sewage flow from residential premises shall be calculated on the basis of 658 liters (150 gallons) per bedroom, per day. The same total infiltrative area requirements shall apply regardless of the type or category of soil absorption system to be utilized.

604.5.2 - Single & Two-Family Residential Premises
Soil absorption systems serving single and two-family residential premises shall possess minimum total infiltrative areas in accordance with the provisions of Table VI –C.
TABLE VI – C

Minimum Required Total Infiltrative Areas
Single & Two-Family Residential Premises

<table>
<thead>
<tr>
<th>Percolation Rate Min./2.54 cm (1 in.)</th>
<th>Soil Texture (Approximate)</th>
<th>Required Infiltrative Area Per Bedroom, in Sq. m. (Sq. Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or Less</td>
<td>Coarse Sand, Gravel</td>
<td>19.5 (210)</td>
</tr>
<tr>
<td>6 – 10</td>
<td>Sand, Loamy Sand</td>
<td>30.5 (330)</td>
</tr>
<tr>
<td>11 – 30</td>
<td>Sandy Loam</td>
<td>46.5 (500)</td>
</tr>
<tr>
<td>31 – 45</td>
<td>Silty Loam</td>
<td>56.0 (600)</td>
</tr>
<tr>
<td>46 – 60</td>
<td>Silt, Sandy</td>
<td>65.0 (700)</td>
</tr>
<tr>
<td>61 or Greater</td>
<td>Clay, Shale</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

604.5.3 - Commercial, Industrial, Multi-Family Residential Premises
Soil absorption systems serving premises other than single or two-family residential premises shall possess total infiltrative areas related to calculated maximum daily sewage flows. The values specified in Table VI –D shall be utilized to determine required total infiltrative areas for respective soil types.

TABLE VI – D

Minimum Required Total Infiltrative Areas
Commercial, Industrial, Multi-Family Residential Premises

<table>
<thead>
<tr>
<th>Percolation Rate Min./2.54 cm (1 in.)</th>
<th>Soil Texture (Approximate)</th>
<th>Required Infiltrative Area in Sq.m./(Sq.Ft.) Per 378 liter (100 gal.) Sewage Flow per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or Less</td>
<td>Coarse Sand, Gravel</td>
<td>13.0 (140)</td>
</tr>
<tr>
<td>6 – 10</td>
<td>Sand, Loamy Sand</td>
<td>20.5 (220)</td>
</tr>
<tr>
<td>11 – 30</td>
<td>Sandy Loam</td>
<td>30.5 (330)</td>
</tr>
<tr>
<td>31 – 45</td>
<td>Silty Loam</td>
<td>37.0 (400)</td>
</tr>
<tr>
<td>46 – 60</td>
<td>Silt, Sandy</td>
<td>44.0 (475)</td>
</tr>
<tr>
<td>61 or Greater</td>
<td>Clay, Shale</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

605 - SOIL ABSORPTION SYSTEMS & DEVICES; DRAINFIELDS

605.1 - Calculation of Total Infiltrative Area
The total infiltrative area of a drainfield shall be equal to the sum of the infiltrative areas of the individual drainage trenches comprising the drainfield. The infiltrative area of a drainage trench
shall be equal to the total trench bottom area, plus 0.186 square meters (2 square feet) of sidewall area per 0.305 m. (1.0 feet) of trench length.

Example: A single standard trench 30.5 m (100 feet) in length and 0.195 m. (3 feet) in width would possess an infiltrative area of:

27.9 sq.m. (300 sq. ft.) - Trench Bottom Area
+18.6 sq.m. (200 sq. ft.) - Trench Sidewall Area
46.5 sq.m. (500 sq. ft.) - Infiltrative Area of Trench

605.2 - Dimensional Standards
A drainfield shall be constructed in accordance with the dimensional standards specified in Table VI – E.

**TABLE VI – E**
**DRAINFIELD DIMENSIONAL STANDARDS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Trenches</td>
<td>2</td>
<td>--------------</td>
</tr>
<tr>
<td>Length of Trenches</td>
<td></td>
<td>30.5 m. (100 ft.)</td>
</tr>
<tr>
<td>Width of Trenches</td>
<td>0.46 m. (1.5 ft.)</td>
<td>0.9 m. (3 ft.)</td>
</tr>
<tr>
<td>Distance From Final Grade To Top of Aggregate</td>
<td>0.3 m. (1.0 ft.)</td>
<td>0.9 m. (3 ft.)</td>
</tr>
<tr>
<td>Uniform Aggregate Depth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beneath Distribution Pipes</td>
<td>15 cm. (6 in.)</td>
<td>--------------</td>
</tr>
<tr>
<td>b. Above Distribution Pipes</td>
<td>5 cm. (2 in.)</td>
<td>5 cm. (2 in.)</td>
</tr>
<tr>
<td>Slope of Trenches &amp; Distribution Pipes</td>
<td>Level Preferred</td>
<td>10 cm./30.5 m.</td>
</tr>
<tr>
<td>Separation Between Trench Sidewalls</td>
<td>2.5 m. (8 ft.)</td>
<td>--------------</td>
</tr>
</tbody>
</table>

605.3 - Dosing Requirements
Drainfields designed to accommodate sewage quantities equal to or exceeding 7470 liters (2000 gallons) per day shall be dosed by means of pumps or siphons to insure uniform distribution of sewage. Dosing quantities and frequencies shall be reviewed and approved by the Health Officer.

**606 - SOIL ABSORPTION SYSTEMS AND DEVICES; ABSORPTION BEDS**

606.1 - Calculation of Total Infiltrative Area
The total infiltrative area of an absorption bed shall be equal to its entire bottom area plus 0.093 sq. m. (1.0 sq. feet) of additional area per 0.305 meters (1.0 feet) of sidewalk perimeter.
Example: An absorption bed 12.2 meters (40 feet) in length and 4.57 meters (15 feet) in width possesses a total infiltrative area of:

- Bed Bottom Area: 55.8 sq. m. (600 sq. ft.)
- Bed Sidewall Area: +10.2 sq. m. (110 sq. ft.)
- Infiltrative Area of Bed: 66.0 sq. m. (710 sq. ft.)

606.2 - Soil Permeability Limits
An absorption bed shall not be permitted in soils which possess permeability slower than 30 minutes per 2.54 centimeters (1.0 inch).

606.3 - Dimensional Standards
An absorption bed shall be constructed in accordance with the dimensional standards specified in Table VI – F.

### TABLE VI – F ABSORPTION BED DIMENSIONAL STANDARDS

<table>
<thead>
<tr>
<th>Item</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Distribution Pipes</td>
<td>2</td>
<td>------------------</td>
</tr>
<tr>
<td>Length of Distribution Pipes</td>
<td>------------------</td>
<td>30.5 m. (100 ft.)</td>
</tr>
<tr>
<td>Distance Between Distribution Pipes</td>
<td>------------------</td>
<td>1.8 m. (6 ft.)</td>
</tr>
<tr>
<td>Separation Between Distribution Pipes and Bed Sidewall</td>
<td>0.46 m. (1.5 ft.)</td>
<td>0.9 m. (3 ft.)</td>
</tr>
<tr>
<td>Distance From Final Grade to Top of Aggregate</td>
<td>0.3 m. (1.0 ft.)</td>
<td>0.9 m. (3 ft.)</td>
</tr>
<tr>
<td>Uniform Depth of Aggregate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Beneath Distribution Pipes</td>
<td>15 cm. (6 in.)</td>
<td>------------------</td>
</tr>
<tr>
<td>b. Above Distribution Pipes</td>
<td>5 cm. (2 in.)</td>
<td>5 cm. (2 in.)</td>
</tr>
<tr>
<td>Slope of Distribution Pipes</td>
<td>Level Preferred</td>
<td>10 cm./30.5 m.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4 in./100 ft.)</td>
</tr>
</tbody>
</table>

606.4 - Dosing Requirements
Absorption beds designed to accommodate sewage quantities equal to or exceeding 7,570 liters (2,000 gallons) per day shall be dosed by means of pumps of siphons to ensure uniform distribution of sewage. Dosing quantities and frequencies shall be reviewed and approved by the Health Officer.

607 - SOIL ABSORPTION SYSTEMS AND DEVICES; SEEPAGE PITS (DRY WELLS)

607.1 - Lining Materials
Materials utilized for lining a seepage pit excavation shall be durable and shall possess sufficient structural strength to prevent collapse or cave-in of the excavation. Lining materials shall allow
free passage of sewage effluent to the surrounding infiltrative surfaces, while excluding the entry of stone or soil into the lined cavity. Acceptable materials include cement blocks, bricks, pre-cast concrete, or other materials approved by the Health Officer.

607.2 - Hatches and Covers
Hatches or covers may be provided on the top surface of a seepage pit to facilitate inspection and cleaning. Such hatches or covers shall be of a material possessing strength and durability equivalent to that of reinforced concrete.

607.3 - Infiltrative Area Requirements
Seepage pits shall provide for a total infiltrative area, either singly or in combination, in accordance with the infiltrative area requirements specified in Tables VI – C and VI – D. Soils possessing an average percolation rate slower than ten minutes per 2.54 centimeters (1.0 inch) shall not be acceptable for seepage pit installation.

607.4 - Calculation of Infiltrative Area
The total infiltrative area for a seepage pit or a combination of pits, shall be calculated in accordance with the following formula:

\[ A = (P_s + P_b) \times N \]

Where:
- \( A \) = Total infiltrative area.
- \( P_s \) = Total sidewall area of pit in contact with permeable soils from lowest inlet level to bottom of excavation.
- \( P_b \) = Total bottom area of excavation.
- \( N \) = Number of seepage pits of equal size.

If multiple pits of differing sizes are utilized as part of a single sewage disposal facility, their combined total effective infiltrative area shall be equal to the sum of individual infiltrative areas of all pits.

607.5 - Dimensional Standards
A seepage pit shall be constructed in accordance with the dimensional standards specified in Table VI – G.
TABLE VI – G
SEEPAGE PIT DIMENSIONAL STANDARDS

<table>
<thead>
<tr>
<th>Item</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from bottom of Excavation to finish grade</td>
<td>----------</td>
<td>6.1 m. (20 ft.)</td>
</tr>
<tr>
<td>Depth of final cover over top of pit</td>
<td>30 cm. (1 ft.)</td>
<td>61 cm. (2 ft.)</td>
</tr>
<tr>
<td>Aggregate Thickness:</td>
<td>a. Bottom of pit 15 cm. (6 in.)</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>b. Between liner &amp; pit sidewalls 15 cm. (6 in.)</td>
<td>91.5 cm. (3 ft.)</td>
</tr>
<tr>
<td>Distance between seepage pits</td>
<td>3 d*</td>
<td></td>
</tr>
</tbody>
</table>

*d = Diameter of greatest horizontal dimension of largest pit.

607.6 - Supplemental Guidelines
The Health Officer shall be authorized to develop supplemental guidelines concerning the location, design, installation and maintenance of seepage pits. Such guidelines shall be reviewed by the Sewage Regulation Technical Advisory Committee authorized in Article IX of these Regulations and approved by the Kent County Board of Health prior to their implementation.

608 - MISCELLANEOUS SOIL ABSORPTION SYSTEMS
Soil absorption systems other than drainfields, absorption beds, or seepage pits shall be installed when, in the judgment of the Health Officer, their use is justified and will adequately protect public health and safety and the natural environment. The use of miscellaneous soil absorption systems shall be subject to the same conditions and limitations which apply to other categories of soil absorption systems.

609 - OPTIONAL SEWAGE DISPOSAL FACILITY FEATURES AND DESIGNS

609.1 - General Provisions
A person who constructs, repairs, enlarges or relocates a sewage disposal facility shall be permitted to incorporate optional features into the design of such a facility, consistent with the provisions of this section. All optional features shall be reviewed and approved by the Health Officer prior to their installation and shall be shown on the permit issued for the disposal facility.

609.2 - Optional Features; Septic Tanks
Among those optional design features which may be approved relative to septic tanks are included the following:

a. Tanks of greater than minimum volumes.

b. Multi-compartment tanks.
c. Inlet fittings or baffles.

d. Risers extending to finish grade, with flush fitting covers.

609.3 - Optional Features; Soil Absorption Systems
Among those optional design features which may be approved relative to soil absorption systems are included the following:

a. Devices to allow for intermittent dosing of soil absorption systems with sewage effluent, including pumps and siphons.

b. Soil absorption systems which possess greater than minimum required infiltrative areas.

c. Multiple soil absorption systems, with appropriate valves and piping to allow alternate dosing of individual systems.

d. Access ports or pipes extending to finish grade with flush fitting covers.

e. Aggregate material beneath drainage piping of greater than minimum required depth.

f. Aggregate cover materials, for the protection of aggregate against infiltration of soil.

610 - ALTERNATIVE SEWAGE DISPOSAL FACILITIES

610.1 - Authorization of Guidelines
The Health Officer shall be empowered to prepare guidelines concerning the application, location, design, construction, usage, and maintenance of specific categories of alternative sewage disposal facilities, devices or processes. Such guidelines shall be approved by the Kent County Board of Health, prior to their implementation.

610.2 - General Provisions
Alternative sewage disposal facilities, devices, or processes may be approved by the Health Officer. An alternative sewage disposal facility or process shall not be approved unless the Health Officer has determined that the use of such a facility, device or process will not create a nuisance, result in a hazard to public health or safety, or endanger the natural environment. The usage of alternative sewage disposal facilities, devices, statues, ordinances, or rules other than those contained in these Regulations and to policies and guidelines adopted pursuant to authority of Section 601 of these Regulations.

610.3 - Experimental Sewage Disposal Facilities
In the absence of applicable guidelines and technical information concerning a new category of alternative sewage disposal facility, device or process, the Health Officer may authorize the utilization of such an alternative facility, device, or process on a limited experimental basis if it is determined that no hazard to public health and safety, nuisance, or degradation of the natural
environment will result. The Health Officer may impose special conditions and requirements pertaining to the approval and use of such a facility, including the submission of detailed engineering plans, periodic operational reports, periodic inspections, and provisions for alternate methods of sewage disposal in the event of failure of the experimental facility.

**ARTICLE VII – VARIANCES**

**701 - AUTHORIZATION TO GRANT VARIANCES**
The Health Officer shall be empowered to grant variances to the requirements of these Regulations in situations when the strict application of such requirements would create a unique hardship or unfair burden upon those affected.

Variances may be authorized only when it can be reasonably demonstrated that no hazard to public health and safety, no nuisance, and no degradation of the natural environment will result.

**702 - DOCUMENTATION OF VARIANCES**
All variances granted by the Health Officer shall be documented in writing. Records concerning a variance shall contain a description of the variance and a statement of the reasons why the variance was authorized. If the variance concerns requirements for a proposed sewage disposal facility, details concerning said variance shall be noted on the permit issued for the facility.

**703 - REVIEW OF VARIANCES**
All documented variances shall be periodically reviewed and evaluated by the Health Officer to insure that they are not contrary to the purposes of these Regulations.

**ARTICLE VIII – VACANT LAND EVALUATIONS**

**801 – PURPOSE**
Vacant land evaluations may be conducted by the Health Officer on behalf of requesting persons for the purpose of determining the suitability of undeveloped properties as sites for installation of sewage disposal facilities. Such evaluations shall be conducted utilizing the standards and requirements specified in these Regulations. The findings of such evaluations are intended for informational purposes only.

**802 - APPLICATIONS FOR VACANT LAND EVALUATIONS**
Applications for vacant land evaluations shall be submitted on forms provided for such purpose by the Department and shall be accompanied by the appropriate fee, as established in Article XI of these Regulations.

If the applicant for an evaluation is not the owner of the property to be evaluated, the applicant shall be responsible for obtaining necessary permissions from the owner to authorize entry upon and evaluation of said property.
803 - RESPONSIBILITY FOR NECESSARY EVALUATION SERVICES
If the Health Officer determines that special evaluative procedures are necessary in order to conduct a vacant land evaluation, the responsibility for arranging for such procedures and the responsibility for paying associated expenses shall be that of the applicant. Such special evaluative services may include excavations, soil borings, permeability tests, soil classifications or other similar tests.

804 - EVALUATION REPORTS
Reports of findings of vacant land evaluations shall be provided in writing to the applicant. The findings of such reports shall relate only specific sites evaluated and to specific development proposals as outlined by the applicant at the time of submitting the application request.

Opinions expressed in evaluation reports shall be subject to revision in the event of any change in conditions, including subsequent revisions to applicable statutes, rules or regulations.

ARTICLE IX – SEWAGE REGULATIONS TECHNICAL ADVISORY COMMITTEE

901 – PURPOSE
A Sewage Regulations Technical Advisory Committee, hereinafter referred to as the “Committee,” may be established for the purpose of advising the Health Officer on technical matters and issues relevant to sewage disposal.

902 - Composition of Committee
The composition of the Committee shall be as follows:

1. Two members shall be sewage disposal facility installation contractors who operate within Kent County.

2. Two members shall be registered professional engineers experienced in sewage disposal facility theory and design.

3. One member shall be a soil scientist possessing specialized training in the identification, classification and interpretation of soil properties and characteristics.

4. One member shall be a faculty member of a local college or university whose area of expertise is relevant to sewage disposal issues.

903 - APPOINTMENTS TO COMMITTEE
Appointments of members of the Committee shall be by the Kent County Board of Health. Committee members shall serve without pay or other compensation or reimbursement.
Appointments to the Committee shall be for a period of two years, provided that initial appointments may be of greater or lesser terms. Committee members may succeed themselves if reappointed.

904 - FREQUENCY OF MEETINGS
The Committee shall convene at such times and frequencies as deemed necessary by the Health Officer.

905 - CONDUCT OF MEETINGS

905.1 - Chairman of Committee
Members of the Committee shall select one of their members to serve as Chairman at the first meeting held each calendar year. The Chairman shall retain his position for the duration of the calendar year.

905.2 - Secretary of Committee
The Health Officer shall act as secretary to the Committee and shall be responsible for the preparation of agendas, notices, minutes and other correspondence.

905.3 - Meeting Agenda
Items for discussion by the Committee may be submitted by the Department, by Committee members, or by other persons having reasonable concerns or interests relative to sewage disposal.

906 - COMMITTEE ACTIONS AND RECOMMENDATIONS
Actions or recommendations of the Committee shall be considered by the Health Officer in administering the provisions of these Regulations. Such actions or recommendations shall not limit or obligate the Health Officer in the administration of these Regulations.

ARTICLE X – APPEALS

1001 - RIGHT OF APPEAL
Any person whose legal rights or privileges are directly affected by a notice of violation, order, citation, or decision issued or made by the Health Officer under these Regulations, may petition the Health Department for a hearing within 20 days of his or her receipt of the notice, order, citation, or decision. The petition shall be in writing and shall be filed with the Health Department.

1002 - CONDUCT OF HEARING
A hearing shall be held before the Health Officer or his/her designee within 30 days after receipt of the petition by the Health Department. After the hearing, the Health Officer may affirm, dismiss, modify, or reverse the notice, order, citation, or decision.
1003 - REVIEW OF DECISION OF HEALTH OFFICER
The decision of the Health Officer shall be final, unless within 60 days of the date of said decision, the appellant files a written petition for review with the Chair of the Legislative and Human Resources Committee of the Board of Commissioners, and review is granted by an Appeal Subcommittee appointed by the Chair of the Legislative and Human Resources Committee. If the Appeal Subcommittee grants review, it shall hear the appeal, make further investigation if necessary, and affirm, dismiss, modify or reverse the decision of the Health Officer.

1004 - RIGHT TO JUDICIAL REVIEW
A person aggrieved by a final decision of the Health Officer or the Appeal Subcommittee under this Article may petition the Circuit Court of Kent County for relief, subject to any limitations provided under state law.

1005 - EMERGENCY POWERS OF HEALTH OFFICER SUSTAINED
Nothing in this Article shall be construed to prohibit the Health Officer from taking appropriate action when an imminent danger to public health or safety exists, as provided in Article IV, Section 408 of these Regulations.

ARTICLE X-A. APPEALS PROCEDURE

1051 – RIGHT TO HEARING
Any person wishing to appeal a notice of violation, order, citation, or decision issued or made by the Health Officer for an alleged violation of the Kent County Health Department Regulations has a right to an administrative hearing and review as provided by this Article.

1052 - REQUEST FOR HEARING
a. To be entitled to a hearing, the appellant must file a written request for hearing with the Health Department, on a form provided by the Health Department, no later than 20 days after receipt of the notice of violation, order, citation, or decision. In computing this period, the day of receipt is not to be included. The last day of the period is to be included, unless it is a Saturday, Sunday, or legal holiday, in which event the period runs until the end of the next Monday or non-holiday.

b. A filing fee, as established by the Board of Commissioners, must accompany the written request for hearing. If the Health Department's notice of violation, order, citation, or decision is dismissed after the hearing, the Health Department may refund the filing fee.

c. Upon receipt of a written request and filing fee, the Health Department shall give or send a copy of these procedures to the appellant or his/her designated representative.
1053 - TIME, PLACE AND NOTICE OF HEARING
a. The Health Department shall schedule and hold a hearing within 30 days after receipt of the written request and filing fee.

b. The Health Department shall serve notice of the time, date, and place of the hearing on the appellant or his/her designated representative by certified mail a minimum of 10 business days before the date of the hearing.

c. The hearing may be adjourned to another specified time, date, or place if the Health Department gives written notice thereof, or if the appellant makes a written request for an adjournment at least 24 hours prior to the scheduled time of the hearing.

1054 - FAILURE TO APPEAR
a. If the appellant fails to appear for the hearing at the scheduled or properly rescheduled date, time, or place after proper service of notice, and no further adjournment has been granted, the hearing may continue and a decision may be made in the absence of the appellant.

1055 - PARTIES
a. The Health Department shall appear at the hearing by its designated representative.

b. The appellant may appear in person or by his or her representative designated in writing.

1056 - Hearing Officers
a. Hearings shall be conducted in the manner set forth below by an impartial Hearing Officer designated by the Health Officer. The Hearing Officer shall not have been involved in the determination to issue the notice of violation, order, citation, or decision.

b. If either party to the hearing believes the Hearing Officer is not qualified to hear the appeal because of personal bias or prejudice, that party may ask the Hearing Officer to disqualify himself/ herself. The request must be accompanied by a sworn written statement of facts showing that the Hearing Officer is biased or prejudiced. The request for disqualification and the accompanying statement of facts in support thereof must be filed no later than 4 business days before the scheduled hearing date. Untimeliness of filing shall be a factor in considering whether or not the motion should be granted. The matter shall be determined by the Health Officer, and his/her determination shall become part of the record and shall be subject to review by a court.
as provided below. When a Hearing Officer has been disqualified, the Health Officer shall assign another Hearing Officer to conduct the appeal.

c. Whenever it becomes impracticable for the Hearing Officer to continue with the hearing, the Health Officer may assign another Hearing Officer to continue the hearing unless the change in Hearing Officer would substantially prejudice either party's case.

1057 - Powers of Hearing Officer
A Hearing Officer may:

a. Administer oaths and affirmations
b. Certify to official acts
c. Provide for the taking of testimony by deposition
d. Regulate the course of a hearing, set the time and place for continuation of a hearing, and fix the time for filing briefs and other documents
e. Direct the parties to appear and confer to consider simplification of the issues by consent of the parties

1058 - CONDUCT OF THE HEARING
During the hearing, and subject to reasonable regulation by the Hearing Officer:

a. Each party shall have an opportunity to make an opening statement.

b. The Health Department designated representative shall then present its evidence against the appellant. The appellant or his or her designated representative may cross-examine all witnesses presented by the Health Department.

c. The appellant shall then present evidence on his or her behalf. The Health Department representative may cross-examine all witnesses presented by the appellant.

d. Both parties may then present rebuttal evidence.

e. At the close of evidence, each party shall have an opportunity to present a final argument or closing statement, either orally or in writing.

1059 - RULES OF EVIDENCE

a. As far as practicable, the hearing shall be conducted in accordance with the rules of evidence that apply in a non-jury civil case in the Michigan Circuit Court. However, evidence may generally be admitted and given probative effect if it is of a type commonly relied upon by reasonable, prudent people in the conduct of their affairs. Irrelevant or unduly repetitious material may be excluded. Effect shall be given to the rules of privilege recognized by law (e.g., attorney/client, doctor/patient).
b. If either party objects to any evidence offered by the other party, the objection must be stated when the evidence is offered. The Hearing Officer shall rule as to the admissibility of the evidence.

c. Subject to the requirements stated in subsections a. and b., the Health Department, for purposes of efficiency and when the interest of the parties will not be substantially prejudiced, may provide for submission of all or a part of the evidence in written form.

d. Writings, recordings, and photographs may be received as evidence in the form of a copy, if the original is not readily available, or may be incorporated by reference, if the material so incorporated is available for reexamination by the parties. Upon timely request, a party shall be given an opportunity to compare the copy with the original, if it is available.

e. The Hearing Officer may take official notice of a fact — that is, accept a fact as true without evidence — if the fact cannot be reasonably disputed because it is generally known throughout Kent County, is within the specialized knowledge of the Hearing Officer, or is capable of accurate and ready determination by resort to sources whose accuracy cannot be reasonably questioned.

f. The Hearing Officer may use his or her experience, technical competence, and specialized knowledge in evaluation of evidence presented to him or her.

1060 - Stipulation of Facts and Settlements

a. The parties, by a stipulation in writing filed with the Health Department, may agree upon any fact involved in the controversy. The stipulation shall be used as evidence at the hearing and shall be binding upon the parties.

b. Except as otherwise provided by law, the entire case may be settled by stipulation, consent to order, waiver, default, or other method agreed upon by the parties.

1061 - DECISION AND ORDER

a. After the administrative hearing, the Hearing Officer shall prepare a decision and order to affirm, dismiss, or modify the Health Department's notice of violation, order, citation, or decision, and shall report the reasons therefor, including findings of fact and conclusions of law. If a party submits proposed findings of fact that would control the decision or order, the decision or order shall include a ruling on each proposed finding.

b. The decision and order shall be based upon the entire record and shall be supported by competent, material, and substantial evidence. Findings of fact shall be based
exclusively on the evidence of record on matters officially noticed pursuant to subsection 1059.e.

c. The parties shall be served with copies of the decision and order and shall be allowed to take exceptions thereto. Any exception must be in writing and filed at least 10 days after receipt of the decision and order.

1062 - Official Record of Hearing
a. The Health Department shall prepare an official record of the hearing, which shall include:

1. The written request for hearing, all notices, and any pleadings, briefs, or written arguments
2. Evidence presented
3. Matters officially noticed, except matters so obvious that a statement of them would serve no useful purpose
4. Any decision, opinion, order, or report by the Hearing Officer

b. Oral proceedings at which evidence is presented shall be recorded by tape recorder or stenographically, but need not be transcribed unless requested by a party who shall pay for the transcription of the portion requested, except as otherwise provided by law.

1063 - Rehearing
a. The Health Department may order a rehearing on its own motion or on request of a party.

b. Where, for justifiable reasons, the record of testimony made at the hearing is found by the Health Department to be inadequate for purposes of judicial review, the Health Department on its own motion or on the request of a party shall order a rehearing.

c. A rehearing shall be noticed and conducted in the same manner as an original hearing. The evidence received at the rehearing shall be included in the record of agency reconsideration and for judicial review. A decision or order may be amended or vacated after the rehearing.

1064 - Administrative Review
a. A party aggrieved by the decision and order of the Hearing Officer may, within 60 days after the date of the decision and order, petition the chair of the Legislative and Human Resources Committee of the Board of Commissioners for review of the Hearing
Officer's decision. Petitions for review shall be made on a form provided by the Health Department.

b. The grant of review and the scope and manner of review shall be within the discretion of an Appeal Subcommittee appointed by the Legislative and Human Resources Committee.

c. If the review is not granted within 60 days after the date of the decision and order of the Hearing Officer, the decision and order shall be final and subject to judicial review as provided by law.

d. If the review is granted, the Appeal Subcommittee may affirm, dismiss, modify, or reverse the decision of the Hearing Officer.

e. A denial of review or a decision on the merits by the Appeal Subcommittee shall be final and subject to judicial review as provided by law.

ARTICLE XI – FEES

1101 - ESTABLISHMENT OF FEES
Fees for services and permits authorized by these Regulations shall be contained in a fee schedule adopted and revised periodically by the Kent County Board of Health and approved by the Kent County Board of Commissioners.

The size of a fee shall be reasonably related to the costs incurred by the department in providing the requested service.

1102 - ADVANCE PAYMENT OF FEES REQUIRED
Fees required for services and permits authorized by these Regulations shall be paid in full prior to the performance of such service or issuance of such permits by the Department.

1103 - REFUNDS OF FEES
Fees paid for services or permits authorized by these Regulations shall be non-refundable unless requests for refunds are received prior to the commencement of actions by the Department pursuant to the requested services or permits.

ARTICLE XII – PENALTIES

1201 - VIOLATIONS DEFINED AS MISDEMEANORS
Any person who violates a provision or requirement of these Regulations shall be guilty of a misdemeanor as provided in Section 2441(2) of the Michigan Public Health Code, Act 368, P.A. 178, as amended.
Such misdemeanors shall be punishable by imprisonment for not more than 90 days or a fine of not more than $200.00, or both.

1201 - SUCCESSIVE VIOLATIONS
Each day that a violation of these Regulations exists shall be considered as a separate offense and may be cited as such.

1203 - CIVIL MONETARY PENALTIES
Pursuant to provisions of Section 2461(1) of the Public Health Code, the Kent County Board of Health may adopt and the Kent County Board of Commissioners may approve a schedule of civil monetary penalties to be levied for specific violations of these Regulations.

ARTICLE XIII – SEVERABILITY

If any clause, section, or article of these Regulations shall be declared invalid or unconstitutional by judicial action, all remaining portions of the Regulation shall remain in full force and effect.

ARTICLE XIV – REPEAL OF PREVIOUS REGULATIONS

Previous regulations entitled “Sewage and Water Regulations for Kent County, Michigan” as adopted by the Kent County Board of Health on April 19, 1982, and approved by action of the Kent County Board of Commissioners on June 2, 1982, are hereby repealed.

ARTICLE XV – APPROVAL AND EFFECTIVE DATE

1501 - REGULATIONS APPROVALS
These Regulations were approved by action of the Kent County Board of Health on December 1, 1994 and approved by action of the Kent County Board of Commissioners on February 9, 1995.

1502 - Effective Date
These Regulations shall be in effect as of March 27, 1995.