

CHAPTER 5
ENVIRONMENTAL AND MISCELLANEOUS REGULATIONS

SECTION 1 DEFINITIONS

- 5.1.001 APPLICANT:** A property owner, or agent of a property owner, who has filed an application for a permit or other approval.
- 5.1.002 BEDROOM:** Any room that has a window, source of heat, and can potentially be made private.
- 5.1.003 DEVELOPER:** A person who undertakes or proposes to undertake an activity requiring a permit or other approval.
- 5.1.004 DRAINAGE:** shall mean the process of draining groundwater, surface water or stormwater runoff.
- 5.1.005 GROUNDWATER:** All water beneath any land surface including water in the soil and bedrock.
- 5.1.006 HIGH GROUNDWATER ELEVATION:** High water table elevation determined in accordance with the provisions of Title 5 by a Soil Evaluator approved by DEP. This elevation is commonly, but not invariably, reached during the months of December through April.
- 5.1.007 NEW CONSTRUCTION:** shall mean the construction of a new building where no building previously existed. New construction may include the replacement or repair of an existing building totally or partially destroyed or demolished or an addition to an existing building.
- 5.1.008 OPEN OR SURFACE DRAIN:** Any uncovered ditch, culvert or similar structure used for the conveyance of surface water runoff. A culvert that carries a watercourse or intermittent stream is not a surface drain.
- 5.1.009 SPECIAL INSPECTIONS:** see Chapter 1 Section 1.1.009.
- 5.1.010 STRUCTURE:** shall mean anything constructed or erected, the use of which requires a fixed location on or in the ground, or attachment to something located on or in the ground, including but not limited to buildings, mobile homes, billboards, signs, tanks, swimming pools, retaining walls, fencing, septic systems, roadways, driveways, and parking lots.
- 5.1.011 SUBSURFACE DRAIN:** An underground conduit used for the conveyance of surface or groundwater, including, but not limited to stormwater culverts, curtain drains and French drains.
- 5.1.012 SURFACE OR STORMWATER RUNOFF:** Excess precipitation or rainfall that flows over the surface of the ground as a thin, even layer (sheet flow) or concentrated in a channel.
- 5.1.013 WATERCOURSE:** shall mean any natural or man made stream, pond, lake, wetland, coastal wetland, swamp or other body of water and shall include wet meadows, marshes, swamps, bogs, and any intermittent or permanent tributary, or any permanent, intermittent, or areas subject to flooding as determined by the Board of Health.
- 5.1.014 WATERSHED:** The area of land from which runoff occurs.

SECTION 2 GENERAL CONSTRUCTION REGULATIONS

5.2.001 All proposed subdivisions and buildings shown on site plans shall be connected to a common sewer if, after a feasibility study and administrative review is completed, it is determined to be feasible. All construction related to the project and sewer connection shall be completed at no cost to the town. It shall be the responsibility of the applicant to maintain all appurtenances to said common sewer as needed for proper operation. Each individual property deed shall be recorded at the Registry of Deeds to reflect the current or future liability of maintenance to the individual property owner(s) for any sewer system, other than a gravity system, which includes but may not be limited to a low pressure or ejector pump system.

5.2.002 REVIEW OF ENGINEERING STUDIES FOR PROPOSED DEVELOPMENTS:

The applicant for any and all developments in the Town of Billerica shall incur the expense for professional services including, but not limited to, Professional Engineers and Registered Land Surveyors, rendered in connection with the review of said plan of development. This review shall include, but not be limited to, proposed drainage calculations, drainage design, flood plain delineation, flood plain filling and compensation, or other projects deemed to require engineering review.

The Board of Health requires that an applicant for a permit or other approval under the Board of Health's Rules and Regulations agree, as a condition of the Board's acceptance of the application, to pay the cost of the professional services rendered to the Board of Health by the Board's Consulting Engineers/Consultants in accordance with Chapter 1 Section 1.4.001 of these regulations. The Board's Consulting Engineers shall submit his or her bill for services rendered directly to the applicant, and the applicant shall be responsible for making full payment of such bill directly to the Board's Consulting Engineers.

5.2.003 SEWER/DRY SEWER CONNECTIONS: The Developer/Applicant of all proposed subdivisions shall provide the installation of wet or dry sewer in the subdivision at the expense of the developer.

5.2.004 BASEMENT FLOOR/SLAB ELEVATION: The elevation of the basement floor or slab of any new building shall be no less than two (2) feet higher than the estimated seasonal highground water table (ESHGWT) as determined by a Massachusetts Certified Soil Evaluator and approved by the Board of Health.

5.2.005 CONNECTION TO PUBLIC WATER SUPPLY: In order to promote and preserve the public health the Board of Health requires that all new structures intended for human habitation be connected to the public water supply where said water supply is within three hundred (300) feet of the structure.

5.2.006 PRIVATE WELLS: No person or company shall dig or drill a well without first obtaining a permit for such from the Board of Health. The fee for said permit shall be in conformance with the current Board of Health fee schedule. A plan showing the lot to be served must be submitted and shall show as a minimum, the location of the well and all subsurface sewage disposal systems within two hundred (200) feet of the proposed well on the proposed lot and all adjacent lots. The plan shall also include all horse barns within one hundred (100) feet of the proposed well. The well shall be tested by a certified laboratory for its potability, and in conformance with current E.P.A. safe drinking water standards. The minimum to be tested shall include total coliform, pH nitrate/nitrogen, and sodium. All results shall be submitted to the Board of Health. Wells used for monitoring or irrigation do not require testing unless ordered by the Board of Health. The Billerica Water Department must be notified of all well permits. All persons are subject to any laws, rules, or regulations established by the Billerica Water Department.

5.2.007 At the Board of Health's discretion, annual testing of potable water may be required and certified by a Massachusetts Certified Laboratory. Also more frequent testing of the potable water may be necessary depending upon the analysis report. All costs incurred are the responsibility of the property owner, agent, or their representative and not the Town of Billerica.

5.2.008 HORSE BARN: Horse barns shall not be constructed within one hundred (100) feet of a surface water supply, private well, or a water course defined in 5.1.0013 nor shall any well be constructed within one hundred (100) feet of a horse barn.

5.2.009 ALTERATION of FLOOD PLAIN, WETLANDS, or ANY AREA SUBJECT TO FLOODING: No building, filling, or alteration shall be allowed in areas shown as wetlands on USGS maps or determined to be wetlands by the Board of Health or Billerica Conservation Commission, further, in accordance with Chapter 5, Section 5 of these regulations, no alteration of flood plain shall occur in flood plain areas.

5.2.010 DRAINAGE REVIEW:

(1) Projects and activities that meet the jurisdiction requirements of Section 2 of the Billerica Stormwater Management By-law shall meet the requirements of Chapter 6 of these regulations.

(2) No foundation or structure, not subject to Section 2 of that By-law, shall be built on any parcel of land unless all on-site and off-site drainage has been approved by the Board of Health. Projects referred to the Board of Health for drainage review shall meet the criteria for approval given in Section 5.2.011 of these regulations. **Submittal requirements are at the discretion of the Director of Public Health, and may include** the following; plans to scale, showing the total drainage basin contributing flow to the site, identifying separate watersheds (separate watersheds shall be color coded for clarity), the basins within the site, topography of the basins, the points of analysis (discharge) for each basin with flow path and soil type. Plans and calculations shall be prepared for both the existing and proposed conditions. A minimum of two (2) sets of submittals are required for presentation to the Board and the Board's Consulting Engineer/Consultant.

5.2.011 CRITERIA FOR APPROVAL OF DRAINAGE DESIGNS FOR PROJECTS NOT SUBJECT TO CHAPTER 6

(1) Site planning and drainage design shall ensure that the proposed work will not result in an increase in the rate of runoff leaving the site at any point on the property line. Sites that discharge stormwater to kettle holes or other low areas, without a defined discharge route, shall also be designed to prevent an increase in the volume of stormwater runoff. All post-development runoff must continue to flow into and recharge the same watershed as it did under pre-development conditions. Proper easements and deed restrictions, if required for drainage structures, shall provide suitable language to include homeowner responsibility and maintenance

(2) Drainage pipe systems shall be designed to transport runoff from the twenty-five (25) year (or greater) event without surcharging the system.

(3) Minimum drainage pipe velocity under the twenty-five (25) year event conditions is 2.5 feet per second.

(4) Stormwater routing calculations shall be submitted for the 2, 10, 25 and 100 year storm events, using the Soil Conservation Service (S.C.S.) method of calculations. Calculations shall be performed using data for a S.C.S. Type III twenty-four (24) hour storm.

(5) Any site that discharges into a system that contains a retention area (one without a discharge point) shall have no increase in either the rate or volume of runoff at the property line of the proposed development.

(6) Where site conditions allow, stormwater should be infiltrated onsite. Low impact development techniques and environmentally sensitive site design, as described in the Stormwater Handbook, should be employed to the maximum extent practicable.

(7) All plans and calculations submitted for review and approval shall be stamped by a Professional Civil Engineer registered in the Commonwealth of Massachusetts.

(8) The drainage design shall incorporate provisions for limiting disturbances during the construction phase. These will include, but not be limited to, provisions for:

- (a) The increase in runoff resulting from the removal of ground cover.
- (b) Minimizing erosion.
- (c) Trapping sediments.
- (d) Inspecting the facilities
- (e) Maintaining the facilities.
- (f) Final site stabilization.

5.2.012 SEWAGE DISPOSAL: Before a building permit is approved by the Board of Health, a determination that the existing sewage disposal system is adequate for proposed construction shall be required. For the purposes of implementation and enforcement, all dwellings, buildings, structures, etc., that require a method of sewage disposal, or may potentially require new or expanded sewage disposal methods, shall be required to upgrade the existing sewage disposal system or provide a new sewage disposal system in accordance with the following provisions:

(1) New dwellings, buildings, structures, must provide sewage disposal in accordance with the most recent State and local regulations, rules, laws, by-laws, etc.

(2) Additions to existing dwellings, buildings, structures, etc. that will add additional bedrooms, living rooms, dens, family rooms, additional living area, or substantial storage area, shall be required to upgrade the existing sewage disposal system as determined by the Director of Public Health or Deputy Director of Public Health. An upgrade shall be in accordance with the most recent State and local regulations, rules, laws, by-laws, etc. or as may reasonably be upgraded given certain site specific conditions.

(3) Exemptions to this policy shall apply to cases where the total increase in proposed additions as described in paragraph (2) does not exceed two hundred (200) square feet. Other cases, such as a garage to be used for storage of motor vehicles only, a porch, deck, screen house, etc., shall also be exempt from the requirement to upgrade a sewage disposal system.

SECTION 3 DESIGN CRITERIA FOR SEPTIC SYSTEMS

5.3.001 Percolation tests may be performed at any time of the year provided that weather conditions are conducive to testing. Percolation tests shall be performed by a Massachusetts Registered Professional Engineer, a Massachusetts Registered Sanitarian, or a D.E.P. approved Soil Evaluator in the presence of a representative from the Board of Health. The Director of Public Health or his designee will make determinations relative to suitable weather conditions for conducting tests.

5.3.002 Deephole tests may be conducted at any time during the year provided a D.E.P. approved Soil Evaluator makes and records on site the soil evaluation as required in Title 5. This test may be conducted provided that weather conditions are conducive to testing. The Director of Public Health or his designee will make determinations relative to suitable weather conditions for conducting tests. All deephole testing conducted for design of a sewage disposal system shall be performed in the presence of an authorized representative of the Board of Health.

5.3.003 The Board of Health or its agents shall have sole authority to make final determinations as deemed necessary regarding deephole testing.

5.3.004 PERCOLATION TESTING FOR THE UPGRADE OF AN EXISTING SYSTEM:

Conditions may exist as to make a percolation test difficult. At the discretion of the Director of Public Health or his designee and with the concurrence of the soil evaluator, the perc rate may be based upon existing data from abutting properties with similar physical conditions. Where multiple perc test results exist, the slowest rate shall be used for the system upgrade design.

5.3.005 A complete application and fee in conformance with the current Board of Health fee schedule, for the observation of soil and ground water testing shall be submitted prior to scheduling. Any parcel of land to be tested shall be staked out so that property boundaries are clearly visible.

5.3.006 A fee for all Disposal Works Construction Permits in conformance with the current Board of Health fee schedule, as applicable, is required prior to issuance. A Disposal Works Construction permit granted by the Board of Health shall expire three (3) years from date of issue. An extension of one (1) year may be granted with administrative approval.

5.3.007 All subsurface sewage disposal systems for new construction of single family dwellings and multiple family dwellings, including condominiums shall be designed to accept a minimum flow of four hundred forty (440) gallons of effluent per day for each dwelling unit. All subsurface sewage disposal systems must be designed and contained on the lot or property it is to service. If a four hundred forty (440) gallon per day design cannot be achieved, then a system may be designed for a design flow of three hundred thirty (330) gallons per day only if a deed restriction limiting the use of the dwelling to three (3) bedrooms is provided. The deed restriction shall state: "This dwelling is restricted to use as a three (3) bedroom home. Any change in use or expansion of use shall require written approval from the Board of Health. This restriction shall become null and void upon an approved connection to the municipal sewer system. The owner(s) and subsequent owner(s) shall disclose this restriction to any potential buyers of the property." No new system shall be designed for less than three hundred thirty (330) gallons per day.

5.3.008 VENTING OF SOIL ABSORPTION SYSTEMS: All soil absorption systems connected to a vent shall be equipped with a suitable air filtering system.

5.3.009 Property which is to be serviced by a water supply other than municipal water, shall not be occupied until water test results are submitted and approved by the Board of Health.

5.3.010 INDIVIDUAL ON-SITE SEWAGE TREATMENT FACILITIES: The construction of individual sewer treatment facilities shall be prohibited throughout the Town of Billerica.

5.3.011 The minimum sewage disposal system design flow for commercial and industrial facilities shall be seventy-five (75) gallons per one thousand (1,000) square feet of floor area. In addition, the design flow criteria for the activities specified in 310CMR15.203, Title 5 shall be applicable, especially for multi-use facilities. A system may be designed in accordance with Title 5 if a proper deed restriction is administratively approved by the Director of Public Health and properly recorded at the Registry of Deeds.

5.3.011(a) Stand-alone food service establishments are exempt from Section 5.3.011 but are subject to all applicable system sewage flow design criteria set forth in 310CMR15.203.

5.3.012 The installer of a Sewage Disposal System shall submit within fourteen (14) days to the Board of Health an "as built" plan of the system as constructed on a form approved by the Board of Health. The "as built" shall include all measurements and reference points necessary to locate at a future date said subsurface sewage disposal system and all its component parts as well as reflect any changes to the approved design plans.

5.3.012(a) The as built plans shall be prepared as follows.

- (1) Provide a sketch of the complete sewage disposal system including ties to at least two (2) permanent reference points.
- (2) Show the location of the building served relative to the nearest street(s).
- (3) Label all components of the system.
- (4) Specify the capacity of septic tanks, pump chambers, and any other similar components.
- (5) Provide the dimensions of the soil absorption system.
- (6) Provide ties to the perimeter of the soil absorption system.

5.3.013 The design engineer shall provide a certified “as built” plan of the complete system to the Health Department. Any changes to the design plans shall be reflected on the “as built” plans. The “as built” plans shall be prepared in accordance with the specifications in 310CMR15.220, Title 5.

5.3.013(a) The as built plans shall include the finish grades of a mounded system showing the system meets the side slope and breakout requirements of Title 5.

5.3.014 DISPOSAL WORKS CONSTRUCTION PERMITS, SEPTIC SYSTEM BONDS, BLANKET BONDS:

(1) Disposal Works Construction shall not be permitted from December 1st through March 15th of the following year unless circumstances exist which are deemed to have the potential to threaten public health, safety or the environment as determined by the Director of Public Health.

(2) Prior to issuance of a Disposal Works Construction Permit the applicant shall provide a cash bond in accordance with the current Board of Health fee schedule, which shall be held by the Board of Health for a period of one (1) year after occupancy of the building served by the subsurface sewage disposal system.

(3) Bonds for septic systems shall be consolidated and kept in one (1) financial institution that shall be selected by the Board of Health. The Board of Health shall prepare the necessary documentation and open the account in the name of the Town and the applicant. The applicant shall be required to submit a cashier’s check in the amount necessary and shall pay the document preparation fee in accordance with the current fee schedule adopted by the Board of Health.

Applicants who desire, may post a maximum bond in accordance with the current Board of Health fee schedule for single family dwellings, multiple family dwellings or for commercial/industrial buildings. These maximum amounts shall be considered blanket bonds and may cover no more than ten (10) dwelling units and no more than five (5) commercial/industrial buildings. All bonds shall be kept in the possession of the Board of Health until such time as the Board of Health determines that they may be released.

(4) The Director of Public Health or his designee shall have the authority to immediately grant a variance to Chapter 5, Section 3.014(2) which requires a cash bond in accordance with the current Board of Health fee schedule on all single family dwelling septic systems under certain conditions. Those conditions shall be:

- (a) That the applicant provide proof of ownership, such as a tax bill or valid purchase and sales agreement.
- (b) That the applicant will agree to self occupy the home for a period of not less than five (5) years from date of occupancy, and if he/she must vacate or sell the premises, they agree to post the required bond amount to be held by the Board of Health for a period of one (1) year from the date that the home is sold or transfers ownership.

- (c) If the applicant does not purchase the property, or reneges on buildings the dwelling and this variance has been duly granted and recorded, then it becomes null and void.
- (d) This variance shall be properly numbered and recorded at the Registry of Deeds in the same manner that all other variances are recorded.
- (e) The applicant shall be required to submit to the Board of Health a certified copy of the variance from the Registry of Deeds before the Director of Public Health or Deputy Director of Public Health shall be allowed to sign a building permit pre-application.

(5) **RELEASE OF BONDS:** Bonds held by the Board of Health shall be released to the owner of record (person named on the bond) only.

SECTION 4 SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN REQUIREMENTS

5.4.001 Subsurface sewage disposal system plans must include as a minimum the following information to be considered for approval. These requirements indicated minimum standards, equivalent or superior methods will be reviewed upon submission.

(1) Plan view drawn at 1 inch = 20 feet or less for lots up to 30,000 square feet, 1 inch = 30 feet or less for lots equal to or greater than 30,001 square feet but less than 50,000 square feet, 1 inch = 40 feet or less for lots equal to or greater than 50,000 square feet. Plans drawn at a scale of 1 inch = 40 feet shall include a blow up of components at a scale of 1 inch = 20 feet for clarity.

(2) Building first floor and basement floor elevations.

(3) Setbacks to property lines for proposed building, leaching area and well.

(4) Septic tank shown, labeled and offset to building.

(5) Distribution box shown and labeled.

(6) Primary and secondary leaching areas shown, labeled and overall dimensioned.

(7) Water service shown and labeled as either pressure or suction with the offset to the leaching area.

(8) All test pits and perc shown and labeled.

(9) Identify all parcels of property within two hundred (200) feet of the proposed soil absorption system and provide the sources of water supply to those parcels (i.e. by name and water account number; or by private well location on each respective parcel of property).

(10) Subsurface drains within twenty-five (25) feet of the system line.

(11) North Arrow.

(12) Street Name.

(13) Benchmark and Datum. Two (2) benchmarks will be required adequately described with their orientation to plan. Preferably they should be located in an area not to be disturbed. Datum must be labeled and shall be NGVD 1929 when site is deemed near a Flood Plain. Plan should identify Benchmark used to obtain elevation of NGVD 1929 Datum.

(14) Legend.

(15) Topography must be obtained by the transit stadia method and shall extend to all areas identified herein.

(16) Plan shall be contoured at a maximum of two (2) foot contour interval. On flat topography, a smaller contour interval and supplemental spot grades at appropriate locations will be required. Plan shall show existing contours as well as proposed contours including grading at house, driveway, walks, retaining walls, etc..

(17) Identify existing structures, old foundations, fences, edge of pavement or traveled way, stone walls, ledge outcrops, watercourses, etc. (any on or off site feature which could influence the design of the system).

(18) Identify any vegetated wetland as identified by Massachusetts General Laws, Chapter 131, Section 40 within fifty (50) feet of any property line.

(19) Identify the Green Engineering Flood Plain zone district line within one hundred (100) feet of any property line.

(20) Lot or lot numbers and total area.

(21) Shade or outline with dimensions limits of excavation of impervious or unsuitable materials.

5.4.002 PROFILES:

(1) Drawn at: Horizontal: 1 inch = 20 feet,
 Vertical: 1 inch = 4 feet

(2) First floor and basement floor shown with elevations.

(3) Show water table offset to basement floor.

(4) Invert at building.

(5) Size, slope, length and type of pipe between building and septic tank.

(6) In and out inverts of septic tank.

(7) Size, slope, length and type of pipe between septic tank and d-box.

(8) In and out inverts of d-box and size of d-box.

(9) Size and type of pipe to beginning of leaching line No. 1. A note indicating that a minimum of the first two (2) feet from the d-box is to be set level shall also be in the profile.

(10) Leaching area length of pipe and slope if applicable beginning invert, ending invert, bottom elevation of stone, offset to water table, and ends capped, looped or vented whichever is applicable.

(11) Existing grade along profile.

(12) Proposed grade along profile where it meets the existing grade.

(13) Show required offset and proposed offset from top of leaching area to side slope for compliance of breakout requirement.

(14) Where there are additional components to the leaching system such as grease trap, dosing chamber, pump chamber, etc. They shall be included in the profile.

(15) Shade or outline with dimensions limits of excavation of impervious or unsuitable materials.

5.4.003 LEACHING FACILITY SECTION:

(1) To be drawn to scale only if there are questions of compliance to breakout requirement and more than one section may be required to demonstrate compliance. Reserve area must be included.

(2) Leaching trenches/field

(a) Spacing of trenches include reserve area.

(b) Width of trenches/field.

(c) Spacing of pipes in field.

(d) Depth of stone.

(e) Slope size and type of leaching pipe. All piping shall be a minimum of Schedule 40 PVC for new construction.

(f) 2 inch of 1/8 inch to 1/2 inch washed stone to cover pipes and stone.

(g) Type of fill material over trenches/field.

(h) If in fill show limit to which topsoil, subsoil or fill material must be removed.

(3) Leaching pits/galleries/chambers

(a) Detail of pit or gallery with width, height.

(b) Side and bottom stone thickness.

(c) Spacing of inlet pipes for galleries and length of galleries.

(d) 2 inch of 1/8 inch to 1/2 inch washed stone to cover system.

(e) Type of fill material over pits/galleries.

(f) Show manholes for access if applicable.

(g) If in fill show limit to which topsoil, subsoil or fill material must be removed.

(4) All plans must illustrate a cross section of the soil absorption system. This cross section must be in detail on the plans submitted.

(5) Reserve areas shall be prepared for system replacement during initial construction with all required appurtenances.

5.4.004 DETAILS:

- (1) Details shall be included for all components of the septic system.
- (2) They need not be drawn to scale.
- (3) Shall specify vehicle loading (if applicable) and dimensions of components.
- (4) For septic tanks, the following shall be included:
 - (a) Septic tanks for new construction and replacement tanks for upgrades shall be equipped with a suitable effluent filter at the outlet of said tank.
 - (b) Septic tanks shall have a manhole brought to final grade over the outlet access port. The manhole shall be secured to prevent unauthorized access.
 - (c) Septic tanks for new construction and replacement tanks shall be 200% of the design flow with a minimum tank size of 1500 gallons and two (2) compartments.
- (5) For pump chambers, the following shall be included:
 - (a) Sizing calculations for chamber and pump (may be submitted separately).
 - (b) Elevations for bottom pump on, pump off alternate pump and alarm on, top of twenty-four (24) hour reserve (if applicable) in invert elevation, force-main out elevation and rim elevation.
 - (c) The electrical junction box in the pump chamber shall be installed outside the chamber and riser. The electrical box shall be suitably protected from corrosion and impact as well as readily accessible for inspection and maintenance. The electrical box may be housed in its own separate component to comply with this requirement.
 - (d) All wire conduit to and from the pump chamber shall be properly sealed with silicone or equivalent material to prevent the passage of sewage gases through the conduit.
- (6) Distribution boxes shall be equipped with suitable flow equalizers in all gravity flow systems.

5.4.005 SUBSURFACE EXPLORATION LOGS:

- (1) Show cross section of each test pit. All testing must be shown.
- (2) Identify soil makeup for each.
- (3) Provide elevation of ground and water table.
- (4) If no water table is encountered state so.
- (5) Date of testing and who was present.

5.4.006 DESIGN CRITERIA:

- (1) Number of bedrooms/people/building square feet/seats (whichever is applicable).
- (2) State whether it is designed for a garbage disposal.
- (3) Number of gallons the leaching system is designed for.
- (4) State the design percolation rate and loading to soil.
- (5) Provide grease trap sizing information and size used (if applicable).
- (6) Provide septic tank sizing information and size used (if applicable).
- (7) Provide dosing chamber sizing information and size used (if applicable).
- (8) Provide leaching area sizing calculations.

5.4.007 PRIMARY AND RESERVE GRADES LEACHING FACILITY:

(1) In table form, give the following information for the primary and reserve leaching area. Line number, beginning invert, ending invert (if applicable), bottom elevation, and water table elevation (for each leaching structure or line).

5.4.008 OTHER PLAN REQUIREMENTS:

- (1) Assessor’s plate and parcel number.
- (2) Title stating the following (in any order or form):
 - (a) Subsurface Sewage Disposal System in Billerica
 - (b) Street
 - (c) Scales
 - (d) Bar Scale
 - (e) Date
 - (f) Name and address of designer and job number
- (3) Locus map showing the site within the Town.
- (4) If there is a request for a variance from the Board of Health or 310CMR15.000 requirements, it shall be noted on the plan.

(5) The following designer’s certification shall be on the plan.

I hereby warranty that this plan meets all requirements of 310CMR15.000 Title 5 of the State Environmental Code, and all applicable regulations of the Town of Billerica, Board of Health. I assume liability for any errors and/or omissions in the design of this sewage disposal system. I certify that this plan has been reviewed by me personally and to the best of my knowledge and belief is correct and free of errors. This warranty must be signed and dated by a Registered Professional Engineer or Registered Sanitarian.

Date
Sanitarian

Registered Professional Engineer, or Registered Sanitarian

- (6) Any other information or data to support full compliance with Title 5.
- (7) If the plan has been prepared by a Registered Sanitarian then it shall also bear the stamp and signature of a Professional Land Surveyor or a note indicating the name of the land surveyor who prepared the topography, his address and date when it was performed.
- (8) Proposed sewage disposal systems that create significant changes in the existing topography may be subject to a drainage review. The design engineer shall be prepared to provide any information deemed necessary to make this determination.
- (9) The design engineer shall provide to the Board of Health and its agents, any information deemed necessary to complete a review of any proposed sewage plan.

SECTION 5 RULES AND REGULATIONS REGARDING THE FLOOD PLAIN

5.5.001 STATUTORY AUTHORITY AND PURPOSE: Whereas further unwise development of known Flood Plain could threaten human life, health and safety, the Billerica Board of Health, under the provisions of Chapter 111, Section 31 of the Massachusetts General Laws, as amended, and in compliance with 44 CFR 60.3 of the National Flood Insurance Program in order to protect the public health and safety of the Billerica residents, hereby adopts the following regulation:

5.5.002 The Flood Plain is identified on the Town of Billerica Flood Plain index map prepared by Green Engineering Affiliates, Inc., 1973, or current map, further identified by 147 contour maps at a scale of 1 inch = 100 feet, referred to on the Flood Index Map and accepted by the Town at a Special Town Meeting

under Article 20, May 8, 1979 and amended at the Fall Town Meeting under Article 21, October 7, 1980 and further amended at the Spring town Meeting under Article 47, May 7, 1985.

5.5.003 Middlesex County Flood Insurance Rate Map (FIRM): Any land including all special flood hazard areas within the Town of Billerica designated as Zone A and AE, on the Middlesex County Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program. The map panels of the Middlesex County FIRM that are wholly or partially within the Town of Billerica are panel numbers 25017C0254F, 25017C0256F, 25017C0257F, 25017C0258F, 25017C0259F, 25017C0262F, 25017C0266F, 25017C0267F, and 25017C0268F dated July 7, 2014; and 25017C0269F, 25017C0278F, 25017C0279F, 25017C0286F, 25017C0287F and 25017C0288F dated July 6, 2016. The exact boundaries of the District may be defined by the 100-year base flood elevations shown on the FIRM and further defined by the Middlesex County Flood Insurance Study (FIS) report dated July 6, 2016. The FIRM and FIS report are incorporated herein by reference and are on file with the Board of Health.

5.5.004 Town of Billerica Flood Plain Maps, Middlesex County Flood Insurance Rate Map (FIRM): The documents identified in Section 5.002 and 5.003 are adopted by reference and declared to be part of this regulation. These documents are on file with the Board of Health.

5.5.005 SPECIFIC STANDARDS:

(1) No structure within the Flood Plain described in Section 5.5.002 or the floodway described in Section 5.5.003 or within twenty-five (25) feet of flood plain shall hereafter be constructed, located, expanded, converted, subdivided or altered; further, no encroachments, including fill, new construction, substantial improvements to existing structures, or other development, is permitted unless a variance is granted by the Board of Health. Exemptions: open decks and sheds not to exceed 120 square feet, may be approved by administrative review and approval.

(2) No buildings or structures shall be constructed nor shall any work or alterations occur within one hundred (100) feet but not less than twenty-five (25) feet of the Flood Plain described in Section 5.5.002 the floodway described in Section 5.5.003, without first obtaining an administrative review and approval by requesting an Administrative Determination of Applicability. This review may include, but not be limited to, the potential impact upon Flood Plain, onsite and offsite drainage, sewage disposal and other conditions deemed necessary to meet the intent of Board of Health Regulations.

(3) The owner of an existing dwelling located within one hundred (100) feet of a Flood Plain may construct a vertical addition or an addition that is supported by piers, pilings, or other methods which would keep it above the flood Plain elevation, provide that the addition does not encroach upon the Flood Plain.

(4) Above ground pools, inground pools, or other structures that are not used as living areas or will not have detrimental environmental impact may be installed or constructed provided that they do not encroach upon the Flood Plain.

(5) The minimum distance between a leaching facility and the Flood Plain boundary shall be one hundred (100) feet. The Flood Plain line is delineated by the Green Engineering Maps and FEMA Maps, accepted by the town of Billerica and the Board of Health. Leaching facilities designed within one hundred (100) feet of Flood Plain may be approved by obtaining an administrative review and approval. This review may include, but not be limited to, the potential impact upon Flood Plain, onsite and offsite drainage, sewage disposal and other conditions deemed necessary to meet the intent of Board of Health Regulations.

(6) Construction of a new leaching facility within one hundred (100) feet of a Flood Plain boundary, for the purpose of upgrading an existing septic system that is not in compliance with the provisions of Title 5, shall not require a variance as determined by the Director of Public Health or his designee, provided the leaching facility does not encroach upon the Flood Plain. This determination shall be based upon the evaluation of site specific conditions and all reasonable efforts to maintain the one hundred (100) foot buffer zone to the Flood Plain boundary.

(7) All new and replacement subsurface sanitary sewage systems shall be designed to prevent infiltration of flood waters.

(8) **DETERMINATION OF FLOOD PLAIN ELEVATIONS:** For the purpose of determining Flood Plain elevations ONLY on proposed plans, the Board of Health will accept plans stamped by a Massachusetts Registered Land Surveyor. Further, the Director shall have the authority to adjust the Flood Plain according to Green Engineering Maps, by a rollback of three (3) feet along the Concord River and one (1) foot along the Shawsheen River. This rollback will conform to adjustments adopted by Town Meeting, when the Green Engineering Flood Plain Maps were adopted as the Town's Flood Plain District in 1978. However, in no case shall he have the authority to adjust the Federal Emergency Management Agency's Maps (FEMA). Further, wherever the FEMA Maps utilize a greater elevation, that shall be the governing elevation used in determinations.

(9) For purposes of interpretation, all Flood Plain areas delineated on the "Green Engineering Maps" whether contiguous to a brook, stream, pond, lake, wetland, swamp, or other bodies of water, or those areas that appear as isolated Flood Plains shall be interpreted as areas subject to flooding, whether seasonal, temporary, or year round and shall be subject to review by the Board of Health for compliance with any federal, state, county, and local laws, rules, regulations, or policies.

The Board of Health's review may include, but not be limited to, public hearings, drainage reviews, environmental impacts, site assessments, or other reviews deemed necessary to render a decision in the best interest of the public health protection.

5.5.006 BASE FLOOD ELEVATION AND FLOODWAY DATA:

(1) **Floodway Data.** In Zones A and AE, along watercourses that have not had a regulatory floodway designated, the best available Federal, State, local, or other floodway data shall be used to prohibit encroachments in floodways which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(2) **Base Flood Elevation Data.** Base flood elevation data is required for subdivision proposals or other developments greater than 50 lots or 5 acres, whichever is the lesser, within unnumbered A zones.

5.5.007 Notification of Watercourse Alteration

In a riverine situation, **Director of Public Health** shall notify the following of any alteration or relocation of a watercourse:

- Adjacent Communities
- NFIP State Coordinator
Massachusetts Department of Conservation and Recreation
251 Causeway Street, Suite 600-700
Boston, MA 02114-2104

- NFIP Program Specialist
Federal Emergency Management Agency, Region I
99 High Street, 6th Floor
Boston, MA 02110

5.5.008 Other Use Regulations

In Zones AE, along watercourses within the Town of Billerica, that have a regulatory floodway designated on the Middlesex County Flood Insurance Rate Maps FIRM encroachments are prohibited in the regulatory floodway which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

- (1) All subdivision proposals must be designed to assure that:
- a) such proposals minimize flood damage;
 - b) all public utilities and facilities are located and constructed to minimize or eliminate flood damage; and
 - c) adequate drainage is provided to reduce exposure to flood hazards

5.5.009 REFERENCE TO EXISTING REGULATIONS

The floodplain district bylaw is part of a federal requirement for communities that choose to participate in the NFIP. However, the state already administers regulations that take care of many floodplain management concerns. Referencing existing regulations is important to ensure that projects have been reviewed under the appropriate state regulations and that variances to the conditions of the bylaw do not erroneously allow variances to state requirements.

The Floodplain District is established as an overlay district to all other districts. All development in the district, including structural and non-structural activities, whether permitted by right or by special permit must be in compliance with Chapter 131, Section 40 of the Massachusetts General Laws and with the following:

- Section of the Massachusetts State Building Code which addresses floodplain and coastal high hazard areas (currently 780);
- Wetlands Protection Regulations, Department of Environmental Protection (DEP) (currently 310 CMR 10.00);
- Inland Wetlands Restriction, DEP (currently 310 CMR 13.00);
- Minimum Requirements for the Subsurface Disposal of Sanitary Sewage, DEP (currently 310 CMR 15, Title 5);

Any variances from the provisions and requirements of the above referenced state regulations may only be granted in accordance with the required variance procedures of these state regulations.

SECTION 6 LICENSING OF DISPOSAL WORKS INSTALLERS, SEPTAGE HAULERS, OFFENSIVE SUBSTANCE HAULERS, AND TITLE 5 SYSTEM INSPECTORS

5.6.001 LICENSING OF DISPOSAL WORKS INSTALLERS: No person shall engage in the construction, upgrade or expansion of any sewage disposal system without first obtaining a Disposal

Works Installer's License from the Board of Health. The following requirements must be met by all persons currently holding or applying for a Disposal Works Installer's License:

(1) The person(s) shall demonstrate capacity of knowledge and experience of the proper construction and installation of sewage disposal systems in accordance with Title 5 and Billerica Health Regulations.

(2) Satisfactory completion (80%) of a written/oral test based on Title 5 of the State Environmental Code and local Health Regulations. This test will be administered during the months of March and November on the 1st and 3rd Monday of the month by appointment only. A test fee is required in accordance with the most current Board of Health fee schedule. This test may be required annually or as often as the Board of Health deems necessary.

(3) License's for Disposal Works Installers are renewed annually on or before January 1 of each year. A proper application, fee and proof of the following minimum insurance requirements is required prior to renewal:

- (a) Public Liability \$100,000 - \$300,000
- (b) Property damage \$50,000
- (c) Underground hazards
- (d) Completed operations

The fee for a disposal works license shall be in accordance with the current Board of Health fee schedule.

5.6.002 LICENSING OF SEPTAGE HAULERS, SEPTAGE HAULING COMPANIES

AND OFFENSIVE SUBSTANCE HAULERS: No person(s) and/or companies shall remove and transport septage and offensive substances through the streets of the Town of Billerica in which the septage or offensive substances were first collected without first obtaining a license from the Board of Health. The following requirements must be met by all persons and companies currently holding or applying for the aforementioned licenses.

(1) Satisfactory completion (80%) of a written/oral test based on Title 5 of the State Environmental Code and local Health Regulations. This test will be administered during the months of March and November on the 1st and 3rd Monday of the month by appointment only. A test fee is required in accordance with the most current Board of Health fee schedule. This test may be required annually or as often as the Board of Health deems necessary.

(2) Licenses are issued for a one (1) year period. All licenses must be renewed on or before January 1st of each year. A properly completed application containing all required information including all disposal sites or treatment works, approved by DEP, where the hauler is authorized to dispose of septage and offensive substances and the applicable fee(s) shall be submitted to the Board of Health prior to the issuance of a license. No license shall be transferred except with the written approval of the Board of Health.

(3) Copies of all contracts or other agreements between the hauler and the receiving facility including any permits to discharge septage and offensive substances shall be submitted to the Board of Health upon request.

(4) Septage and Offensive Substance Haulers shall note all activity on a system pumping form approved by the Board of Health and the report shall be submitted to the Board of Health on a monthly basis. Whenever the contents of a septic tank, cesspool, leaching pit, grease trap, portable toilet or other holding tanks are pumped, the conditions shall be noted on the report. If there was no activity for a particular month, then that shall be reported to the Board of Health. Pumping reports shall be properly

completed with all required information including the treatment works where the hauler disposed of septage and offensive substances.

(5) Grease traps shall be inspected monthly for maintenance and shall be cleaned by a licensed septage hauler whenever the level of the grease is twenty-five (25) percent of the effective depth of the trap, or at least every three (3) months, whichever is sooner. This activity shall be noted on a monthly pumping report submitted to the Board of Health.

5.6.003 LICENSING OF TITLE 5 SYSTEM INSPECTORS: Title 5 System Inspectors shall obtain a license from the Board of Health to inspect septic systems in the Town of Billerica. The following requirements must be met by all persons currently holding or applying for a Title 5 System Inspector license.

(1) The person shall demonstrate experience in septic system inspections and have attended training provided by DEP and who have passed an examination prepared and administered by DEP.

(2) Satisfactory completion (80%) of a written/oral test based on Title 5 of the State Environmental Code and local Health Regulations. This test will be administered during the months of March and November on the 1st and 3rd Monday of the month by appointment only. A test fee is required in accordance with the most current Board of Health fee schedule. This test may be required annually or as often as the Board of Health deems necessary.

(3) Licenses for Title 5 System Inspectors shall be renewed annually on or before January 1st of each year. A proper application, fee and pertinent information must be submitted for approval.

5.6.004 CRITERIA FOR INSPECTION:

(1) The intent of Section 5.6.004 is to provide reasonable guidelines for the inspection of existing septic systems. The goal of the inspection is to provide sufficient information to make a determination as to whether or not a system is protecting public health and the environment. The inspector is not certifying that the system is adequate for the current use of the system nor for the future use of the system.

(2) **MINIMUM REQUIREMENTS FOR A TITLE 5 SYSTEM INSPECTION:** The following are the minimum requirements necessary to complete an inspection. Meeting these minimum criteria however, should not be construed as completion of an acceptable inspection, if through reasonable effort; a complete inspection of all components of the system is feasible. Furthermore, if a complete inspection cannot be performed, the inspector must provide adequate documentation of the specific conditions which prevented a complete inspection and should indicate on the inspection form what was done to try to locate components, determine high groundwater, etc.

- (a) The inspection must note the general conditions of the property to identify any obvious signs of failure. These would include but not be limited to backup of sewage to the facility, effluent ponding, breakout to the surface of the ground or to surface waters, and other occurrences which professional judgement would deem indications of failure.
- (b) All components prior to the leaching facility must be located and inspected. In a conventional component system, this would generally require inspection of the septic tank and distribution box. It may be necessary to expose a portion of the soil absorption system to determine its condition. If the leaching system is a leaching pit(s), open the pit(s) and pump the contents after an initial inspection to determine if groundwater infiltrates back into the pit. The leaching pit(s) shall be evaluated based on cesspool criteria for failure. If a cesspool system, all cesspools in the system must be exposed for inspection. If any component cannot be located or inspected, or any determination

cannot be made, the inspector shall consult the Board of Health on what steps shall be taken to complete the inspection.

- (c) **DETERMINE HIGH GROUNDWATER ELEVATION AT THE SITE.** The location of the bottom of the leaching facility in relation to the high groundwater elevation is a common factor in the failure of systems. In these situations, sewage is not adequately treated before it enters the groundwater table. Therefore, it is most important that the high groundwater elevation be properly determined. A system may appear to be functioning properly, however, the system fails to protect the environment because of a portion of the leaching facility is below the high groundwater elevation. This is a critical section of the inspection report. Therefore, inspectors should make a greater effort to gather all available information to justify their determinations. Acceptable methods of estimating high groundwater elevation include but are not limited to:
- 1) Review plans of the sewage disposal system. The inspector shall note the date of the deephole tests.
 - 2) Review sewage disposal plans of abutting parcels of property.
 - 3) Observe site conditions. Look for groundwater infiltration in leaching pits. Use a hand auger to examine soil conditions.
 - 4) Observe local conditions. Look for sump pumps and water marks in the building whose system you are inspecting. Check the elevations of nearby water bodies and or wetlands.
 - 5) Check pumping records. Frequent pumping each spring may indicate a high groundwater problem.
- (d) **FLOOD PLAIN:** The Board of Health enforces rules and regulations for the protection of Flood Plains. Inspectors should be aware of these areas in town. The Flood Plain is delineated on the FEMA Map and Green Engineering Flood Plain Maps. A septic system located within a Flood Plain may have a detrimental impact upon the public health and the environment and shall require further evaluation by the Board of Health.
- (e) **DRAINAGE:** Surface and subsurface drainage onto or into the area of a leaching facility can flood the facility and result in a failure of the system. Drainage may result from stormwater runoff coming from a higher elevation or from a ditch or drain from elsewhere on-site or offsite of the property. The inspector should note if the system is located in a low area, which is likely to collect runoff of water. Inspectors should also look for subsurface drains in close proximity to the system. These conditions shall be included in the inspection report. Inspectors can review the Green Engineering Flood Plain Maps for drainage flow patterns.
- (f) **GARBAGE GRINDERS:** When a residence has a garbage grinder, the system inspector shall check to see if the system is designed to accept discharge from the garbage grinder. In particular, the capacity of the septic tank shall be a minimum of fifteen hundred (1500) gallons and a two compartment tank or two tanks in a series shall be required as specified in 310CMR15.223. Furthermore, the soil absorption system shall be designed to accept one hundred fifty (150) percent of the design flow. If the system is not designed for a garbage grinder, this condition would constitute a violation of Title 5. In this case, the system would conditionally pass, provided that there are no other violations of the failure criteria listed in 310CMR15.303. The violation can easily be corrected by the removal of the garbage grinder and providing documentation of such action to the Board of Health.
- (g) **LAUNDRY SYSTEMS:** Laundry systems and any other secondary sewage disposal systems shall be identified, inspected and the inspector's findings shall be reported on the inspection form. The minimum requirements for an inspection shall apply to laundry systems and any other secondary systems. A description of the condition of the laundry system shall include but not be limited to the size of the system, any signs of failure, the depth of the liquid level relative to inlet invert, indications of groundwater infiltration and

any other pertinent details. If the laundry system and or any other secondary system fails but the primary sewage disposal system passes the inspection, this would be a condition where further evaluation is required by the Board of Health. The inspector shall promptly bring these situations to the attention of the Board of Health so that it may be addressed in a timely manner.

- (h) If conditions exist, which show the system may conditionally pass or may require further evaluation by the Board of Health, the inspector shall consult the Board of Health at the time of the inspection before any further action is taken.
- (i) The inspector shall report their findings on the latest DEP approved system inspection form within thirty (30) days of completing the inspection. The report shall be completely filled out including the following information:
 - 1) Attach copies of all available records from the Health Department, homeowner, and all other appropriate sources or note if on file at the Board of Health. Records may include but are not limited to design plans, as built drawings, pumping records, plot plans and any other pertinent information.
 - 2) Locate and determine the flood zone that the property is located within on the FEMA maps.
 - 3) Locate the property on the Green Engineering Flood Plain map and identify the plate number under Part C, System Information (high groundwater determination) of the inspection form.
 - 4) Provide recommendations for maintenance including but not limited to pumping, repair of inlet and outlet tees or baffles, the installation of risers to provide better accessibility to the system components, etc.
 - 5) Provide comments documenting the inspection including but not limited details describing the conditions and construction of all components, liquid levels in all components, leakage, solids carryover, etc.
 - 6) Provide assessor's map number and parcel number.
 - 7) Supply a copy of the assessor's map number with lot identified.
 - 8) Identify seasonal, perennial, or any surface waters within one hundred (100) feet of the system being inspected.
 - 9) Identify subsurface or surface drainage systems within one hundred (100) feet of the system being inspected.
 - 10) Photographic evidence is recommended and may be required in some inspections.

(3) The inspector shall be responsible for all work related to the inspection of septic systems. Further, the components of the system shall be exposed in the presence of the inspector to ensure the integrity of the inspection. If the ground in the area of the component has been disturbed or the system has been exposed prior to the inspection, the inspector shall note the conditions on the inspection report and consult the Board of Health as soon as possible. These conditions may be grounds for further evaluation by the Board of Health. The inspector shall advise the owner prior to the inspection that it is a violation for any person to construct, upgrade, modify, alter or expand a septic system without the prior approval of the Board of Health.

(4) Title 5 System Inspectors shall provide any information deemed necessary by the Board of Health to complete a review of any system inspection report. The Board of Health shall not accept any improperly filled out system inspection report or reports with insufficient information to sustain the report findings.

5.6.005 REVOCATION, SUSPENSION, LATE FEES: Failure to properly renew any licenses required in sections 6.001, 6.002, or 6.003 shall be subject to, but not limited to, late fees, and possible suspension or revocation.

SECTION 7 MISCELLANEOUS REGULATIONS

5.7.001 IMPROPER DISPOSAL, NOISE, ODORS:

(1) No person as defined in Chapter 1 Section 1.006 shall improperly dispose of any rubbish, refuse, bulky waste, hazardous waste, junk, scrap, sewage, offal, demolition material, building material waste or any noxious substance, or allow any such substance to escape into the environment. Further, no person shall create excessive noise, or allow offensive odors, materials, substances, etc. as determined by the Health Department, to escape into the environment which in the opinion of the Health Department causes harm to other persons. Any act in violation of this regulation shall constitute a nuisance relative to Massachusetts General Laws Chapter 111, Section 122 and shall be punishable as the law allows or may be punishable by non-criminal disposition provided for under Chapter 1 Section 19.001.

(2) **ASBESTOS DISPOSAL:** The Board of Health requires a permit for asbestos removal and disposal. Said permit may be issued after all information and applicable fees are submitted to the Board of Health.

5.7.002 MUNICIPAL SOLID WASTE DISPOSAL AND COLLECTION: Collection dates and routes will be determined by the Board of Health and may be subject to change pending contractual obligations or other circumstances.

(1) **HOLIDAY COLLECTIONS:** If a holiday falls on the scheduled collection day for a collection route, collection will commence on the following day.

(2) **CURRENT ACCEPTABLE WASTES:** Acceptable wastes shall mean all solid waste which can be placed into acceptable containers, excluding, inherently dangerous, toxic and hazardous wastes which shall from time to time be designated as "hazardous wastes" by State or Federal regulatory authorities having appropriate jurisdiction.

- (3) **CURRENT UNACCEPTABLE WASTES:** As of the adoption of this regulation,
- (a) Demolition debris.
 - (b) Any of the following, in whole or in part: Auto hulks, engine blocks, transmission blocks, heavy machinery, skimobiles, motorcycles, or tractors.
 - (c) Stumps, regardless of size, and limbs or branches exceeding two and one half (2 ½) inches in diameter or four (4) feet in length.
 - (d) Pathological wastes.
 - (e) Toxic and volatile chemicals, such as but not limited to: Oil based paint, paint thinner, paint remover, insecticides, herbicides, pool chemicals, household solvents, driveway sealers, hazardous craft supplies, wood strippers, or any other household chemicals.
 - (f) Explosives.
 - (g) Automobile batteries, tires, motor oil and antifreeze.
 - (h) Florescent bulbs.
 - (i) Propane gas tanks or other flammable materials.
 - (j) Items not appearing as unacceptable waste may still be unacceptable. Residents are required to contact the Board of Health or its contractor for the proper determinations.

(4) **CONTAINER:** Shall be a suitable receptacle, with a capacity no greater than thirty-five (35) gallons, constructed of plastic, metal or fiberglass, having handles of adequate strength for lifting and having a tight fitting lid capable of preventing entrance into the container by vectors and spillage. The mouth of a container shall have a diameter greater than or equal to that of the base. The weight of a container and its contents shall not exceed seventy-five (75) pounds. Pasteboard cartons, paper bags, and

wooden crates are not suitable receptacles for weekly collection and may not be collected by the contractor. Plastic rubbish bags (3-ply minimum) are acceptable.

(5) Refuse shall be placed curbside no later than 7:00 AM of the day of collection and the contractor shall not commence collection earlier. Residents may not place refuse containers curbside before 5:00 p.m. the day before collection.

(6) Prior to collection it is the resident's responsibility to maintain safe and sanitary conditions at the curbside collection point and to otherwise comply with these regulations.

(7) Containers shall be removed within twelve (12) hours after daily collection and must be stored out of sight of public view in a secure location. However, containers must be removed no later than 7:00 p.m. the day of collection.

(8) **BULK WASTE COLLECTION:** Residents may place one (1) bulk item curbside weekly for collection and disposal. Bulk items are considered to be sofas, chairs, bed mattresses and boxsprings, tables, desks, etc.

(9) **LEAF COLLECTION:** Leaf and other yard waste will be collected curbside during special collections in the fall and spring or as otherwise determined by the Board of Health. These items may not be placed curbside for weekly collection and must be collected during special collection periods. Leaf and yard waste must be placed in paper biodegradable bags.

(10) **APPLIANCES/WHITE GOODS:** Items such as, but not limited to, refrigerators, freezers, washing machines, dryers, hot water heaters, ovens, dishwashers, air conditioners, trash compactors, dehumidifiers, etc., are collected bi-weekly and require a permit from the Board of Health. The fee for a permit shall be in accordance with the most current Board of Health fee schedule.

(11) **CATHODE RAY TUBE (CRT) ITEMS:** Televisions, computer monitors, and other CRT items must be collected separately and is scheduled for collection by the Board of Health. Residents must contact the Board of Health or the Town's current Solid Waste Disposal Contractor to schedule pickup and disposal.

(12) **CONSTRUCTION AND BUILDING MATERIALS INCLUDING EARTH AND GRAVEL WILL NOT BE COLLECTED:** Building contractors will be responsible for the proper disposal of all construction and building material or other debris resulting from work performed around residences. Residents performing home improvements are responsible for proper disposal of building material. Residents cannot dispose of these materials with weekly curbside pick up.

5.7.003 PRIVATE SOLID WASTE DISPOSAL AND COLLECTION: All persons that use commercial waste containers shall keep said containers, all appurtenant structures, and ground areas properly maintained and in a clean and sanitary manner.

(1) Collection and disposal for private solid waste shall not commence prior to 7:00 a.m. and shall cease no later than 7:00 p.m.

(2) The Board of Health may require certain persons, deemed to be creating a public health nuisance, to take appropriate action to abate said public health nuisance to the satisfaction of the Board of Health.

SECTION 8 RULES AND REGULATIONS RELATIVE TO THE USE OF RECOMBINANT DNA TECHNOLOGY

5.8.001 USE OF RECOMBINANT DNA TECHNOLOGY:

(1) The experimentation with, or use of, recombinant DNA technology shall be undertaken only in strict conformity with the current "Guidelines" of the National Institute of Health (NIH), or in conformity with such superseding laws and regulations as may be established by other Federal Agencies or by Act of Congress; and in conformity with this regulation and other health regulations as the Billerica Board of Health may from time to time promulgate.

(2) The Institutional Biosafety Committee required by the NIH Guidelines should be broad-based in its composition. It should include members from a variety of disciplines within the institution. It shall also include at least two (2) community representatives appointed by the Billerica Board of Health, one of who shall be the Director of Public Health. The two (2) community representatives shall be bound to the same provisions on non-disclosure and non-use of proprietary information and trade secrets as other members of the Institutional Biosafety Committee, except to the extent that disclosure is necessary to alleviate any public health hazard.

The minutes of all meetings of the Institutional Biosafety Committee shall be delivered to the Board of Health within ten (10) days of the meeting after first removing any proprietary information and trade secrets therefrom. Such minutes shall be public records. The full text shall remain on file in the records of the institution for inspection at all times by any member of the Committee.

(3) The institution shall prepare a Biosafety Manual which describes how the NIH Guidelines will be implemented at the institution. The manual should include provisions defining the following:

- (a) Work project and containment level approval process.
- (b) Personnel training requirements.
- (c) Medical surveillance program,
- (d) Standard laboratory rules and practices.
- (e) Emergency procedures.

This manual shall be approved by the Institutional Biosafety Committee.

(4) The institution shall observe the following requirements:

- (a) Personnel training requirements shall be appropriate to the task assigned. Training shall include orientation to the NIH Guidelines and/or any superseding laws and regulations, the Biosafety Manual and general laboratory safeguards.
- (b) Emergency procedures shall describe actions to be taken if an accident contaminates personnel, the laboratory or the environment, and procedures for notification of appropriate governmental agencies. Billerica Police, Fire and Public Health Officials shall be trained in appropriate emergency response procedures.
- (c) The institution shall, subject to the limitations of available technology, utilize personnel and laboratory monitoring techniques appropriate to each organism's degree of hazard.
- (d) The institution shall, to the extent possible, ensure the purity of host organism strains and test resulting recombinant containing organisms for resistance to commonly used therapeutic antibiotics.
- (e) Any significant breach of containment and the associated remedial action shall be reported to the Institutional Biosafety Committee. Any environmental release shall be reported immediately.
- (f) Any significant or potentially rDNA related employee illness shall be reported to the Institutional Biosafety Committee.
- (g) It shall be the duty of the Institutional Biosafety Committee to investigate any case of potentially work-related illness associated with the use of rDNA. The results of such

investigation shall be forwarded to the Director of Public Health. All personnel medical records shall be kept confidential and shall not be public records.

- (h) The Institution shall allow inspection and review of practices and procedures under this regulation. The Billerica Board of Health may retain competent professional assistance in the conduct of such inspection. The institution shall reimburse the Town of Billerica for the direct expense of up to one (1) inspection or review per year. Any inspector shall be subject to the same requirements regarding the confidentiality of trade secret and proprietary information as a community resident member of the Institutional Biosafety Committee. Any inspection reports shall be delivered to the Board of Health only after all confidential and proprietary information has been removed. Such reports shall then

become public record. The full text of the inspection report or review shall remain on file in the records of the institution for inspection at all reasonable times by any member of the Committee.

5.8.002 RESTRICTIONS ON THE USE OF RECOMBINANT DNA TECHNOLOGY:

- (1) Experimentation with, or use of, recombinant DNA requiring a P3 or P4 level of containment shall not be permitted.
- (2) Use of recombinant DNA technology shall not be permitted in areas for residential purposes.

SECTION 9 REGULATIONS REGARDING STABLING OF HORSES

5.9.001 No person, firm, or corporation, owning or responsible for the custody of horses or ponies shall keep said animals or occupy any buildings, shed or other structure which does not conform with the requirements of these regulations for the purpose of stabling such animal, unless a permit is first issued and the provisions of these regulations are fully complied with.

(1) All permits shall expire December 31 of each year but may be renewed annually provided the applicant is then qualified to receive a permit and the premises for which a renewal is sought has been inspected by the Animal Inspector. Further a proper application and fee must be submitted.

(2) No structure for the stabling of horses shall be smaller than will adequately house such animals, nor shall such stable be less than nine (9) feet by thirteen (13) feet, with a minimum ceiling height of eight (8) feet. Five hundred (500) square feet of corral space for each horse shall be provided. This corral space will be adequately fenced so as to prevent the escape of the horses therefrom.

(3) The walls and roof of the stable shall be constructed to be weather proof. The use of rotten half burned or inferior lumber is prohibited. The interior of the stable shall be free from any protrusions (i.e.: nails or splinters) liable to injure the animals.

(4) The door of every stable shall be no less than four (4) feet by seven (7) feet, properly hung, so as to be weather proof when closed.

(5) Properly sized receptacles, adequate for the number of permitted horses, shall be provided for the storage of grain. Sanitary space shall be maintained for the storage of hay and bedding. An adequate supply of clean water shall be maintained convenient to the stable.

(6) No horse barn or stable shall be located within one hundred (100) feet of a private well, Flood Plain or water course as defined in 5.1.003

(7) The individual stalls in a stable shall be separately partitioned in a suitable manner and faced with suitable boards to a height of four (4) feet above the stall floor. Such stall shall be provided with adequate drainage. Each box stall shall be no less than ten (10) feet in width by ten (10) in depth. Four (4) feet by eight (8) feet is to be considered a straight stall. A service space shall be provided in the rear of not less than nine (9) feet in width.

(8) A suitable manure storage area must be designated on the property which is adequate for the number of permitted horses. Said manure shall be properly disposed of when necessary. The designated area must be located maintained to avoid causing a nuisance. The stable shall be maintained in clean, sanitary condition at all times and the interior shall be cleaned as often as necessary to maintain sanitary conditions.

(9) Any lawfully permitted premises, building shed or other structures used for the purpose of stabling horses which create such a condition as to be dangerous to the public health in any way or to be injurious, noxious or offensive to the neighborhood, shall be declared to be a nuisance as determined by the Board of Health pursuant to Massachusetts General Laws Chapter 111, Section 122.

(10) All property owners with horse/stable permits issued by the Board of Health are required to comply with all other applicable laws, rules or regulations of the Commonwealth of Massachusetts and the Town of Billerica. It shall be the responsibility of the permit holder to assure compliance with applicable laws, rules or regulations other than the Board of Health.

SECTION 10 CARNIVALS, FESTIVALS AND CIRCUS'

5.10.001 All midway food concessions shall be inspected prior to actual opening date. Items of concern, include, but not limited to, those that are potentially hazardous, such as tuna fish, chicken salad, egg salad, etc.

5.10.002 **FOOD PROTECTION:** Plastic shields shall be provided on concession stands featuring cotton candy, taffy apples, pop corn, and whenever deemed necessary to prevent contamination from dirt, dust, sneezing, etc.

5.10.003 No sleeping or smoking shall be allowed in any midway food concession stand.

5.10.004 Dumpsters and/or refuse containers shall be provided in a quantity to contain all rubbish and shall be emptied as conditions require. At least two (2) dumpsters shall be provided, one at each end of the midway, or in locations determined by the Board of Health. All areas including the midway shall be cleaned daily to eliminate wind blown litter.

5.10.005 **POTABLE WATER SUPPLY:** Water shall be supplied from the Town water system and shall be under pressure. Hot and cold water shall be provided under pressure at all food concession stands.

5.10.006 **SANITARY WASTES:** All trailers with chemical toilets shall not discharge contents into the environment, but shall have them pumped or cleaned out as needed. Waste water from washing procedures shall be controlled so as not to create a nuisance. A minimum of five (5) portable chemical toilets are to be provided, two (2) for each sex and one (1) handicapped. Additional units shall be required, if in the opinion of the Board of Health, they are necessary.

5.10.007 Before any horses and/or ponies or other animals are allowed on the grounds of the carnival, festival, or circus, evidence shall be produced of valid inoculations against encephalitis, tetanus and the result of the Coggins test.

5.10.008 An application and applicable fees in accordance with the current Board of Health fee schedule to hold a carnival, festival, or circus must be submitted to the Board of Health office seven (7) days before the event is to open. Approval of an application and final inspection must be completed of the premises twenty-four (24) hours before said event is to open.

5.10.009 There shall be a cash bond posted in the amount of two thousand (2,000) dollars and a bond agreement submitted with the Board of Health prior to issuance of a permit. The bond will be returned after a special inspection of the premises, after the event closes, and there are no outstanding violations which need correction.

SECTION 11 HOUSING STANDARDS

5.11.001 The Board of Health adopts by reference 105CMR400.000 Chapter I and 105CMR410.000 Chapter II of the Massachusetts State Sanitary Code as local regulations.

SECTION 12 THROUGH 20

Reserved for future regulations, amendments, etc.

SECTION 21 PENALTIES

5.21.001 Any persons, firm, or corporations violating or failing to comply with any provision of these rules and regulations, shall be penalized in accordance with the penalty provisions of Chapter 1, Section 19 inclusive.

SECTION 22 SEVERABILITY

5.22.001 If any paragraph, sentence, phrase or word of these rules and regulations shall be declared invalid for any reason whatsoever, the decision shall not affect any other portion of these rules and regulations which shall remain in full force and effect and to this end the provisions of these rules and regulations are hereby declared severable. Notwithstanding the provisions that may be in conflict with the Massachusetts General Laws, the revised by laws of the Town of Billerica, these rules and regulations will be binding upon all parties concerned.