

SUBDIVISION REGULATIONS

Chapter 170

From the

CODE

of the

TOWN OF BARKHAMSTED

**COUNTY OF LITCHFIELD
STATE OF CONNECTICUT**

[Printed as adopted 10/27/1988, and including Low Impact Development amendments of 10/3/2012 and as slated for amendment during codification. Consult municipal records for possible amendments adopted thereafter.]

SUBDIVISION REGULATIONS

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[HISTORY: Adopted by the Town of Barkhamsted Planning and Zoning Commission October 27, 1988. Section 170-4A, 170-21B(2), 170-24E(5), 170-27B and 170-29A(2) amended during codification.]

**ARTICLE I
General Provisions**

- 170-1. Purpose, amendment**

- A. The purpose of these regulations shall be provided for in Chapter 126 of the Connecticut General Statutes, and to assure that the development of tracts of land is in keeping with the character of Barkhamsted's diverse landscape and to provide safe and pleasant neighborhoods in which to live.
- B. For these purposes, the Planning and Zoning Commission of the Town of Barkhamsted, County of Litchfield, State of Connecticut, hereby adopts the following regulations.
- C. These regulations may from time to time be amended, changed or repealed by the Planning and Zoning Commission, as provided in Chapter 126 of the Connecticut General Statutes, as amended.

170-2. Definitions and word usage.

- A. Word usage. For the purpose of these regulations, certain common terms and words used herein shall be interpreted and defined as follows: Unless the context clearly indicates to the contrary, words used in the present tense include the future tense, words used in the plural number include the singular, the word "herein" means "in these regulations;" and the word "corporation," a partnership and an incorporated association of persons, such as a club; "shall" is always mandatory; a "building: or "structure" includes any part thereof; and "used" or "occupied," as applied to any land or building, shall be construed to include the words "intended, arranged or designed to be used or occupied."
- B. Definitions. The following are the definitions of common terms found in these regulations.

APPLICANT - The landowner of record or the authorized agent of such owner proposing a subdivision or resubdivision.

APPLICATION - The application for approval of a subdivision or resubdivision in accordance with these regulations, including all required information, data, maps and plans submitted.

BEST MANAGEMENT PRACTICES: Techniques that are effective practical ways of preventing or reducing pollution and providing environmental stewardship. Refer to 2004 Connecticut Stormwater Quality Manual, as amended.

COMMISSION - The Planning and Zoning Commission of the Town of Barkhamsted

HYDROGRAPH: A graph showing the variation in discharge or depth of a stream of water over time.

INFILTRATION: The process of precipitation percolating into the subsoil.

LOW IMPACT DEVELOPMENT (LID): A site design strategy intended to maintain or replicate predevelopment hydrology through the use of small-scale controls integrated throughout the site to manage runoff as close to its source as possible.

NONPOINT SOURCE POLLUTION: Pollution caused by diffuse sources that are not regulated as point sources and are normally associated with precipitation and runoff from the land that carries pollutants.

PERMEABLE PAVING: Materials that are alternatives to conventional pavement surfaces and that are designed to increase infiltration and reduce stormwater runoff and pollutant loads. These materials have variable porosity dependent on the product, its installation and the site conditions.

PROFESSIONAL ENGINEER: A person licensed by the State of Connecticut to practice as a professional engineer in civil engineering.

RAIN GARDENS/BIOFILTRATION: A low impact development practice to manage and treat stormwater runoff by using a specially designed planting soil bed and planting materials to filter and infiltrate runoff gathered in a shallow depression.

STORMWATER: Water consisting of precipitation runoff or snowmelt.

STORMWATER MANAGEMENT PLAN: Plan describing the potential water quality and quantity impacts associated with a development project both during and after construction. It also identifies selected source controls and treatment practices to address those potential impacts, the engineering design of the treatment practices, and maintenance requirements for proper performance of the selected practices.

STORMWATER RUNOFF: Above ground water flow resulting from precipitation or snowmelt.

STORMWATER TREATMENT: Devices constructed for primary treatment, pretreatment or supplemental treatment of stormwater.

STORMWATER TREATMENT TRAIN: Stormwater treatment practices, as well as site planning techniques and source controls, combined in series to enhance pollutant removal or achieve multiple stormwater management objectives.

STREET - Any state highway or town-maintained road suitable for two-way vehicular travel or a proposed street, as shown on a subdivision map approved by the Commission and filed in the office of the Town Clerk.

TOWN - The Town of Barkhamsted, Connecticut

WATER QUALITY SWALES : Vegetated open channels designed to treat and attenuate the water quality volume and convey excess stormwater runoff.

WATER QUALITY VOLUME: The volume of runoff generated by one inch of rainfall on a site.

170-3. Authority

Under the authority granted by the General Statutes of the State of Connecticut (Chapter 126) the Planning and Zoning Commission of the Town of Barkhamsted does hereby require that any application for subdivision or resubdivision shall meet the following regulations.

170-4. Applicability.

In accordance with Chapter 126 of the Connecticut General Statutes:

- A. These subdivision regulations shall apply to the subdivision and resubdivision of land within the Town of Barkhamsted.
- B. No subdivision or resubdivision of land shall be made nor any subdivision lot sold or offered by sale by any person until an application for subdivision or resubdivision has been submitted to and approved by the Barkhamsted Planning and Zoning Commission and record subdivision map, as defined herein, has been endorsed by the Commission and recorded by the applicant in the office of the Barkhamsted Town Clerk.

170-5. Statutory definitions.

- A. The statutory definitions are as follows or as they may be amended in the Connecticut General Statutes:
 - (1) Subdivision. A "subdivision" is defined as the division of a tract or parcel of land into three (3) or more parts or lots made subsequent to October 13, 1972, for the purpose, whether immediate or future, of sale or building development, expressly excluding development for municipal, conservation or agricultural purposes and including resubdivision.
 - (2) Resubdivision. A "resubdivision" is defined as a change in a map of an approved or recorded subdivision or resubdivision if such change:
 - (a) Affects any street layout shown on such map;
 - (b) Affects any area reserved thereon for public use: or
 - (c) Diminishes the size of any lot shown thereon and creates an additional building lot, if any of the lots shown thereon have been conveyed after the

approval or recording of such map.

- B. The Commission has the authority to determine if existing divisions of any land constitute a subdivision.

170-6. Penalties for offenses.

Any person, firm or corporation making a subdivision of land without the approval of the Commission shall be subject to monetary fines provided for in the Connecticut General Statutes.

**ARTICLE II
Procedural Steps and Requirements**

170-7. Applicability of statutes and regulations.

The procedural steps and requirements for subdivision application and review shall be as required by state statutes, as amended, and as required by these regulations. The following sets forth the key procedural steps to be followed by the applicant and the Commission.

170-8. Informal review.

Informal preliminary subdivision plan review is strongly recommended but not required. (See Article III, 170-19)

170-9. Submission of formal subdivision application.

- A. A complete formal application meeting all the requirements of Article III must be submitted to the Planning and Zoning Office at least ten (10) days in advance of a regularly scheduled meeting in order to be considered at said meeting.
- B. The applicant shall submit an original and two (2) copies of all required maps, plans and reports. Additional copies shall be provided by the applicant where necessary as requested by the Commission.

170-10. Acceptance of the subdivision application.

- A. At its regularly scheduled meeting following submission of the application, the Commission shall determine whether the application has been submitted in complete required form. If the application is incomplete, the applicant should be so advised. An incomplete application is sufficient grounds for denial of the application.
- B. Upon acceptance of an application, the Commission shall set a date for public

hearing as required by state statute for a resubdivision or, if deemed necessary by the Commission, for a subdivision.

170-11. Regional referral.

As required by state statute, where a proposed subdivision abuts or includes land in another municipality, the Commission, before approving such plan, shall submit it for an advisory report to the Regional Planning Agency or Council of Elected Officials which serves the other municipality.

170-12. Field review.

The Commission may set a date for a special meeting for a field trip review at which the Commission and/or its staff will inspect the subdivision site.

170-13. Commission review.

In its review of any application, the Commission may request the review, comment and assistance of the Fire Marshal, other town officials or outside technical or legal advisors.

170-14. Public hearing.

- A. Hearing on resubdivision is required. If the Commission determines that an application constitutes a resubdivision, then a public hearing shall be held on the application as required by state statute.
- B. Hearing on subdivision is optional. If the Commission determines that it is in the public interest, it may hold a public hearing on a subdivision application.
- C. Public notice. Public notice of any public hearing shall be given by the Commission as required by state statute. The applicant shall provide a list of the names of all current adjoining property owners of record.

170-15. Decision.

The Commission shall approve, approve and modify, or disapprove the application, entering into the records its reasons for such action, and shall publish and communicate its decision as required by state statute.

170-16. Decision on subdivision involving inland wetlands.

Where an application involves inland wetlands, the Commission shall not tender its decision until the Inland Wetlands Commission has submitted a report with its final decision on the application. The time for decision by the Commission is extended to thirty-five (35) days after the filing of the report of the Inland Wetlands Commission.

170-17. Completion of required modifications and conditions.

- A. When the Commission modifies and approves an application, it shall promptly advise the applicant of the required modifications to the maps, plans or other application documents. No application shall be endorsed for filing until the required modifications have been completed and submitted in the final required form.
- B. If not provided in a complete form at the date of approval, all approvals shall be conditioned upon the applicant's presentation and recording of any deeds or easements required by the Commission and, upon the applicant's execution and filing of any required performance guaranty, in the form prescribed under Article VIII, guaranteeing completion of the required improvements.
- C. All of the above conditionally required information, documents or performance guaranties shall be submitted within sixty (60) days of the date of the Commission's approval. If not so submitted, the subdivision approval shall be deemed automatically void.
- D. The subdivision plan shall not be endorsed by the Chairman or Secretary until the performance guaranty has been received and until all required modifications to the subdivision map or other documents have been completed.

**ARTICLE III
Subdivision Application Requirements**

170-18. Preparation of subdivision application.

- A. It is the subdivision applicant's responsibility to prepare and present a complete formal application to the Commission. Applicants are advised to review and be familiar with these regulations.
- B. This Article lists the documents, forms, maps, plans and reports which are required as part of a complete formal application.
- C. Article II sets forth the procedure for submission, review and decision on a subdivision or resubdivision application.
- D. Article IV specifies the required form and content of maps and plans.
- E. Articles V and VI establish the standards that shall apply to the design and/or construction of a subdivision lot layout and site improvements (e.g. streets, drainage systems, etc.)

170-19. Informal preliminary plan review.

- A. A subdivision applicant is encouraged to submit an informal preliminary plan for review before preparation of the complete, more detailed required formal application.
- B. A preliminary plan is not a substitute for the formal application requirement. An applicant is not required to submit a preliminary plan, nor is the applicant or the Commission bound to the review comments and suggestions made by the Commission.
- C. This informal procedure offers both the applicant and the Commission the opportunity to save time and expense in the review of the formal application. Changes or modifications usually can be made more readily and economically to an informal preliminary plan than to a formal subdivision application.
- D. The informal preliminary plan shall not require a fee and shall not include a completed application form. The preliminary plan should show sufficient information on a plan map to allow a general planning review under the standards of these regulations. It is recommended that the informal plan meet the standards for a site development plan. (See 170-25)

170-20. Submission of formal application.

A complete formal subdivision application as required by these regulations (See 170-21 below) must be submitted to the planning and zoning office at least ten (10) days in advance of a regularly scheduled meeting in order to be considered at said meeting. (Subdivision application procedures are detailed in Article II.)

170-21. Formal subdivision application requirements.

The following is a list of the documentation, maps and plans required as part of the subdivision application:

- A. The following shall be required for all formal applications:
 - (1) Application form.
 - (a) Applications shall be made, in writing, on the forms provided by the Commission, which are available at the building and zoning office
 - (b) The application form shall be signed by the landowner applicant or his lawful agent, as evidenced by attached power of attorney. If the subdivision or resubdivision is proposed by a person, firm or corporation other than the owner of the land to be subdivided or resubdivided, the

application shall also be signed by the owner of the land or his lawful agent.

- (2) Fee. The fees for a subdivision application shall be in the amount stated on the application form.
- (3) Record subdivision map. A record subdivision or resubdivision map shall be prepared and submitted in conformity with the requirements of 170-23 and 170-24 of these regulations.
- (4) Sewage disposal report.
 - (a) The applicant shall submit a written sewage disposal report prepared by a qualified engineer and certified as accepted by the Health Official.
 - (b) In this report, the applicant shall show and the Health Official shall certify that the proposed location for the subsurface sewage disposal system meets or exceeds the highest applicable requirement of the State Public Health Code, as amended, and any other appropriate health code requirements.
 - (c) The report shall include the results of percolation tests and deep hole test pits taken at locations and at times as approved by the Health Official. Where there are regulated inland wetlands soils on a proposed lot, prior to taking the percolation and deep hole tests, wetland boundaries in the vicinity of the proposed house site and septic field shall be properly marked in the field by a certified soil scientist.
 - (d) It shall be the responsibility of the applicant to notify the Health Official to arrange for a site inspection for the taking of required tests. The completed sewage disposal report shall be submitted to the Health Official for review and certification well in advance of the planned date of submission of a subdivision application.
 - (e) Any sewage disposal report submitted to the Commission without the certification of the Health Officer shall be considered incomplete and shall in itself constitute sufficient grounds for denial of the application.
 - (f) Any revisions to lot lines made after the Health Official's initial report shall be resubmitted for final review and approval.

B. The following shall be required for all formal applications, where applicable:

- (1) Water supply report.
 - (a) In areas of the Town, as may be identified by the Commission, where the suitability of groundwater quality is questionable and when on-site water

supply wells are proposed, the Commission may require that the applicant provide information to document the potential quality of the water supply.

- advised
- (b) When on-site water supply wells are proposed but not established at the time of subdivision approval, the record subdivision map shall include the following statement: "Approval of this subdivision (or resubdivision) by the Barkhamsted Planning and Zoning Commission cannot and does not guarantee the quantity and quality of water supply. Landowners are to drill and test a water supply well before construction."
 - (c) Where the application involves the creation or expansion of a community water system with a distribution system that supplies water for human consumption to no fewer than fifteen (15) service connections or twenty-five (25) persons, nor more than two hundred fifty (250) service connections or one thousand (1,000) persons for a least sixty (60) days in a year, then the following is required:
 - [1] The applicant shall provide evidence of submission of three (3) copies of an application for approval of a certificate of public convenience and necessity to the State Department of Public Utility Control (DPUC).
 - [2] The Commission shall not approve a subdivision involving a water system subject to the approval of the DPUC unless and until a certificate of public convenience and necessity has been issued to the water company and a copy of the same has been provided to the Commission.
 - (2) Evidence of submission to the Barkhamsted Inland Wetlands Commission. Whenever an application includes land regulated as an inland wetland or watercourse by the Inland Wetlands Commission, the applicant shall provide evidence that a copy of the subdivision application has been filed with the Inland Wetlands Commission before or not later than the same day as filing with the Planning and Zoning Commission. Any application which does not include this evidence shall be subject to denial by the Commission. (**NOTE:** Where a development proposal impacts an inland wetland or watercourse, applicants are advised to seek any required United States Army Corps of Engineers 404 permit.)

A biological assessment of the natural resources located on the subject property with special reference to wetlands, vernal pools and biodiversity prepared by a qualified expert shall be submitted unless the Commission waives the requirement because the proposed activity will have minimal impact to the environment. A report on the project from the Inland Wetlands Commission shall be considered in determining whether to require a biological assessment on the subject project.

- (3) Site development plan. A site development plan shall be prepared and submitted for any application proposed for building development, whether immediate or in the future. The site development plan shall conform to the requirements of 170-23 and 170-25 of these regulations.
- (4) Erosion and sediment control and grading plan. An erosion and sediment control and grading plan shall be prepared and submitted for certification by the Commission with any application where the cumulative disturbed area is more than one-half (1/2) acre. The control plan shall conform to the requirements of 170-23 and 170-27 of these regulations. Where it is feasible, the mapped information required for the plan may be shown on the site development plan and construction plan.
- (5) Construction plan and profiles. Plans, profile drawings and typical cross sections shall be submitted where a subdivision application involves site improvements, including streets, catch basins, manholes, swales, watercourses, headwalls, sidewalks, curbs, bridges, culverts and other structures and improvements required by these regulations. The construction plans and profiles shall conform to the requirements of 170-23 and 170-26 of these regulations.
- (6) Storm drainage report and flood elevation data. Where an application involves storm drainage improvements or construction within or near the one-hundred-year flood hazard area, a storm drainage report shall be required. This report shall be prepared by a civil engineer licensed in the State of Connecticut. It shall meet the requirements of Article VII and shall include, at a minimum, a base map, prepared in accordance with 170-23, showing the drainage watershed, floodplain elevations and drainage patterns. It shall also show the methodology and computations used to calculate stormwater runoff and the recommended pipe sizes.
- (7) Cost estimate. An engineer's estimate of the cost of construction of site improvements shall be submitted.
- (8) Legal documentation of subdivision. Where there is a question of whether a proposed or filed division of land constitutes a subdivision or resubdivision, the Commission may require the applicant to submit an affidavit issued by a Connecticut-licensed attorney that the division of land does or does not constitute a subdivision or resubdivision. Such affidavit shall include an abstract of the title history for the relevant period of time and narrative explanation of the conclusions.
- (9) Easements and deeds. Copies of all easements and deeds necessary to carry the subdivision plan into effect shall be submitted. The submission of certain

proposed legal instruments may be submitted later but must be delivered before the endorsement of the record subdivision map.

- (10) Permits and agreement. Copies of other local, state and federal permits, if issued, and copies of proposed agreements with utility companies shall be submitted.
- (11) Supplemental data. Other data and information may be required from the applicant in order to establish that the proposed subdivision complies with the requirements of these regulations.

ARTICLE IV

Specifications for Maps and Plans

170-22. General

This Article provides the detailed specifications and information which must be shown on the various maps and required as part of a subdivision application. (See Article III). Each map or plan serves a different purpose and must provide certain information related to that purpose.

- A. The record subdivision map is intended to be suitable for permanent filing in the Town land records.
- B. The site development plan shows existing conditions and proposed development so that the Commission can properly evaluate the impact of the proposed design and layout of the subdivision.
- C. The erosion and sediment control and grading plan must specify how erosion will be avoided and contained as required by state statute.
- D. The construction plan must specify the specific location and detailed design of proposed site improvements (streets, drainage systems; etc.).

170-23. Maps and plans to be prepared by professional.

- A. The maps and plans required by these regulations shall show the information required and shall be prepared in accordance with the required standards hereinafter specified.
- B. All such maps and plans shall be prepared by and bear the name, seal and signature of a professional engineer and/or land surveyor licensed by the State Board of Registration for Professional Engineers and Land Surveyors of the State of Connecticut. Pertinent data and computations shall be presented to the Commission for review upon request.

170-24. Record subdivision map.

- A. The record subdivision map shall be prepared with an accuracy meeting or exceeding standards for a Class A-2 type of survey as specified on the Code of Recommended Practice for Standards of Accuracy of Surveys and Maps approved by the State Board of Registration for Professional Engineers and Land Surveyors.
- B. The Commission may accept a Class D survey for large parcels not proposed for building or development.
- C. All maps shall be clearly and legibly drawn on polyester film (Mylar). The process will be certified by a live stamp affixed with indelible red ink and shall be twenty-four by thirty-six (24x36) inches.
- D. The record subdivision map should be drawn to a scale of one (1) inch equals forty (40) feet but in no case at a scale of less than one (1) inch equals one hundred (100) feet. Upon approval of the subdivision, the applicant shall also provide a map of the subdivision property lines, lot lines and all right-of-way lines at a scale of one (1) inch equals two hundred (200) feet. This map may be a photo reduction of the record subdivision map.
- E. The map shall show the following:
 - (1) The title of the subdivision, if any, which shall not duplicate the title of any previous subdivision in the Town of Barkhamsted.
 - (2) The name and address of the owner of the land to be subdivided and the name and address of the applicant, if different from the owner.
 - (3) The date, scale, true and magnetic North points and zoning classification.
 - (4) Existing and proposed property and street lines, indications of adjoining property lines and street lines for a distance of two hundred (200) feet and the names of all adjacent subdivisions or property owners.
 - (5) All inland wetlands soils as defined by Public Act 72-155 and as regulated by the Barkhamsted Inland Wetlands Commission, delineated in the field by a certified soil scientist.
 - (6) Land within the Floodplain District, as defined in Chapter 193 of the Zoning Regulations. When a subdivision does not include land within the Floodplain District, the following notation shall be included on the map: "This

subdivision does not include land within the Floodplain District as defined under the Zoning Regulations."

- (7) Existing and proposed watercourses, including ponds and swamps; existing and proposed easements, rights-of-way, encroachment lines and areas reserved for drainage, watercourses, wetlands and conservation areas; and the limits of any areas to be reserved or protected from excavation or filling.
- (8) Proposed lots and lot numbers; existing and proposed open spaces for parks; stream protection and other open spaces; the square footage or acreage of all lots and open spaces; and the total acreage of land included in the subdivision. Where the Commission has specified that the development of a lot or portion of a lot shall be limited to a certain buildable area, such buildable area shall be clearly shown along with a notation defining the development limitation.
- (9) Existing permanent buildings and structures.
- (10) Dimensions on all lines to the hundredth of a foot; all bearings or deflection angles on all straight lines; and the central angle, tangent distance and radius of all arcs. For lots with frontage on a curve or arc, the dimensions of the front yard building setback line shall also be shown.
- (11) The width of all streets, rights-of-way and easements and the street name.
- (12) Existing and proposed monuments and any Town boundary lines.
- (13) A location map showing the location of the subdivision in relation to existing streets in the Town at a scale of not less than one (1) inch equals one thousand (1000) feet.
- (14) An index map, if the proposed subdivision is divided into sections or is of such size that more than one (1) sheet is required, showing the entire subdivision, with lots, lot numbers, streets, street names and a delineation of areas covered by the section or sheet.
- (15) The survey relationship of proposed streets to nearby documented Town streets or state highways where practical.
- (16) An approval and endorsement block as shown in the Appendix to these regulations.

170-25. Site development plan.

- A. The site development plan shall be drawn to a scale of not less than one (1) inch equals one hundred (100) feet. The plan shall show existing conditions and the proposed subdivision and all contiguous land of the applicant in order to allow the

Commission to complete a planning review of the proposed subdivision, including its relationship to the contiguous land of the applicant.

- B. The site development plan shall show the information required on the record subdivision map and the following information:
- (1) As required on the record subdivision map in 170-24, the site development plan shall show the following items in 170-24E(1) through (12) inclusive.
 - (2) Identification of the boundary of any streambelt protection and flood hazard protection area as defined and shown on the Town Plan of Development.
 - (3) The boundary and any aquifer protection area as defined in the Town Plan of Development and delineated on the Town Plan Map.
 - (4) The boundary of any public water supply watershed as shown on the Town Plan of Development Map.
 - (5) Areas with slopes in excess of twenty percent (20%).
 - (6) The dimensions of all proposed property and street lines and the lot area and total acreage of land included in the subdivision.
 - (7) The buildable area of the lot, showing a location for a proposed dwelling or other principal building on each lot, the potential location and dimensions of the subsurface sewage disposal system, including primary and reserve leaching fields, the well location and driveway corridors.
 - (8) Existing topographic contours at intervals not exceeding ten (10) feet based on United States Geological Survey contours or a filed or aerial survey. Where deemed necessary, the Commission may require contours at intervals not greater than two (2) feet based on a filed or aerial survey or other suitable sources and keyed to the town, state or United States bench mark where such are within one-half (1/2) mile of the subdivision boundary.
[See 170-27B(4)(c).]
 - (9) The location of historic or archaeological sites and principal wooded areas.
 - (10) Any ledge outcrops and existing stone walls and fences within the subdivision.
 - (11) The width of all streets, rights-of-way and easements; the proposed width of all pavement; and proposed street names.
 - (12) Existing and proposed storm drains, catch basins, manholes, swales, watercourses, headwalls, sidewalks, gutters, curbs and other structures.

- (13) Spot elevations on both existing and proposed roads to indicate tentative grading of roads.
- (14) The approximate location of any percolation seepage test holes, deep test pits and borings.
- (15) The limits of any areas proposed for regrading by excavation or filling and the limits of any areas proposed to be reserved and protected from excavation or filling.

C. In a non residential subdivision, the applicant shall prepare a Site Development Plan to demonstrate to the Commission that each lot is suitable for development. The Site Development Plan accompanying the record subdivision map is a conceptual plan that shall demonstrate each lot meets the minimum requirements for the I-3 zone and can support a building, driveway, associated parking, septic system, and water supply. Prior to development of each lot, the property owner shall obtain site plan approval in accordance with Zoning Regulations Article VII, Section 193-40 of the Zoning Regulations, based on a specific tenant use and building design.

170-26. Construction plans.

- A. Construction plans for all proposed streets, drainage and other improvements shall be drawn on polyester film (Mylar) stamped with indelible red ink stamp. Plan and profile drawings shall be prepared for all proposed streets, storm drains, gutters, catch basins, ditches, watercourses, headwalls, sidewalks, curbs and other structures and underground utilities and shall be drawn on polyester film (Mylar) having sheet size of twenty-four by thirty-six (24x36) inches and shall be drawn to a horizontal scale of one (1) inch equals forty (40) feet and a vertical scale of one (1) inch equals four (4) feet.
- B. Contours shall be shown at two-foot intervals based upon a field of aerial survey. Profile drawings and elevations shall be based on official town, state or United States bench marks. The bench marks used shall be noted on the plan. Construction drawings shall show at least the following information, in accordance with good engineering practice, as appropriate for the particular subdivision.
 - (1) The title of the subdivision and the date, scale, North point, town and state.
 - (2) For streets, all information required by these regulations (see Article VI) and Chapter 166, street and sidewalks, Article II, including but not limited to the existing grades at the center line and at both street lines and the edge and the width of the pavement; street cross sections at all cross culverts; and a typical street cross section.
 - (3) The depth, invert, slope and size of all pipes, swales, culverts, catch basins,

headwalls and watercourses and ditch and watercourse cross sections.

- (4) The approximate location of lot lines intersecting the street line and the lot numbers and street names.
- (5) Sidewalks, curbs, gutters and other structures and underground utilities.
- (6) Detail drawings of any bridges, box culverts, deep manholes and other special structures.
- (7) The words "For location of underground electric, telephone and other facilities of public utilities, inquire of appropriate utility company."
- (8) The words "Approved by the Barkhamsted Planning and Zoning Commission," with designated place for the signature of the Chairman and the date of signing.
- (9) The words "Recommended for Approval by the Board of Selectmen," with a designated place for the signature and the date of signing by the First Selectman. (See Appendix).

170-27. Erosion and sediment control and grading plan.

- A. An erosion and sediment control and grading plan shall be submitted for certification by the Commission with any application for a subdivision or resubdivision when the cumulative disturbed area is more than one-half (1/2) acre. Said plan shall comply with the requirements of this section of these regulations.
- B. Where lots are proposed for future building development, the Commission may, at its discretion, require that a detailed erosion and sediment control plan associated with the development of certain subdivision lots be submitted as part of the application for a zoning/building permit, which plan shall be certified by the Commission or its authorized agent prior to the issuance of the zoning permit. In such cases, the notation specified in Section 4 of the Appendix to these regulations shall be shown on the record subdivision map.
- C. Erosion and sediment control plan definitions shall be as follows:

CERTIFICATION-Approval by the Barkhamsted Planning and Zoning Commission that a soil erosion and sediment plan complies with the applicable requirements of these regulations.

DISTURBED AREA- An area where the ground cover is destroyed or removed, leaving the land subject to accelerated erosion.

EROSION-The detachment and movement of soil or rock fragments by water, wind, ice or gravity

INSPECTION-The periodic review of sediment and erosion control measures shown on the certified plan.

SEDIMENT-Solid material, either mineral or organic that is in suspension, is transported or has been removed from its site of origin by erosion.

SOIL-Any unconsolidated material or organic material of any origin.

SOIL EROSION AND SEDIMENT CONTROL PLAN-A scheme that minimizes soil erosion and sedimentation resulting from development, and includes, but is not limited to, a map and a narrative.

- D. General information and requirements. A soil erosion and sediment control plan shall contain proper provisions to adequately control accelerated erosion and sedimentation and reduce the danger from stormwater runoff on the proposed site based on the best available technology. Information as required below shall be shown separately or as part of the site development plan and construction plan.
- E. Project narrative and time schedule. The plan shall include a narrative describing:
- (1) The development project.
 - (2) The time schedule for the following:
 - (a) All major construction activities, indicating the anticipated start and completion of development.
 - (b) Creating and stabilizing disturbed areas.
 - (c) Grading operations.
 - (d) Applying erosion and sediment control measures and facilities onto the land.
 - (e) Design criteria, construction details, detailed installation/application procedures and maintenance programs.
 - (f) Soil erosion and sediment control measures.
- F. Erosion and sediment control plan. The following information shall be shown at a scale of one (1) inch equals forty (40) feet on the site development plan or on a separate plan.

- (1) Existing and proposed topography, wetlands, watercourses and water bodies.
- (2) Proposed site alterations and disturbed areas, including cleared, filled, or graded areas.
- (3) Within the disturbed areas, topography contours at a detail adequate to evaluate the proposal based upon the standards defined below. When it is determined necessary, the Commission may require two-foot contour intervals based upon the field survey.
- (4) The location and design details for all proposed erosion and sediment control measures and facilities.
- (5) The sequence of grading, construction activities, installation of erosion and sediment control measures and final stabilization.

G. Minimum acceptable standards.

- (1) Plans for soil erosion and sediment control shall be developed in accordance with these regulations using the principles as outlined in Chapters 3 and 4 of the Connecticut Guidelines for Soil Erosion and Sediment Control (1985), as amended. Soil erosion and sediment control plans shall result in a development that minimizes erosion and sedimentation during construction, is stabilized and protected from erosion when completed and does not cause off-site erosion and/or sedimentation.
- (2) The minimum standards for individual measures are those in the Connecticut Guidelines for Soil Erosion and Sediment Control (1985), as amended. The Commission may grant alternate standards when requested by the applicant if technically sound reasons are presented.
- (3) The appropriate method from Chapter 9 of the Connecticut Guidelines for Soil Erosion and Sediment Control (1985), as amended, shall be used in determining peak flow rates and volumes of runoff unless an alternative method is approved by the Commission.

H. Issuance or denial of certification.

- (1) The Commission shall either certify that the soil erosion and sediment control plan complies with the requirements and objectives of these regulations or deny certification when the development proposal does not comply with these regulations.
- (2) Prior to certification, any plan submitted to the Commission may be reviewed by the Litchfield County Soil and Water Conservation District, which may make recommendations concerning such plan.

I. Conditions relating to soil erosion and sediment control.

- (1) Planned soil erosion and sediment control measures and facilities shall be installed as scheduled according to the certified plan. The Commission may require a performance guaranty to guarantee completion of the proposed erosion and sediment control measures. (See Article VIII)

J. Inspection. Inspections during development shall ensure compliance with the certified plan and that control measures and facilities are properly performed, installed and maintained.

ARTICLE V
General Standards

170-28. Purpose

All subdivisions shall be planned to meet the design and construction standards of these regulations and to meet the objectives for conservation and development as stated in the Town Plan of Development. The purpose of these standards is to assure that the subdivision and development of land will be designed and constructed:

- A. To protect and promote the public health, safety and welfare, and to preserve Barkhamsted's diverse system of open spaces and its rural character.
- B. To avoid the development of land which is not suitable for that purpose.
- C. To encourage subdivision design that protects and conserves unique and fragile natural resource lands.

170-29. General subdivision design standards.

- A. In order to serve the purposes of subdivision regulations as set forth in Chapter 126 of the General Statutes, especially to ensure proper provision for protection of irreplaceable resources and unique and fragile features of value to the Town of Barkhamsted and the State of Connecticut, applicants are encouraged to design subdivisions to avoid development of the house site, septic field, driveway, streets or other development improvements on the land defined below and to protect those lands from harmful effects:

- (1) Land within the flood hazard areas as defined in Chapter 193, Zoning Regulations, Floodplain District, and as shown on the Federal Emergency management Agency Map (Flood Insurance Rate Map).
- (2) Inland wetlands and watercourses as defined and regulated by the Inland Wetlands Commission.

- (3) Streambelt protection and flood hazard protection areas as shown on the Town Plan of Development.
- (4) Designated public water supply watershed lands as shown on the Town Plan of Development Map.
- (5) Land within the aquifer protection area as shown on the Town Plan of Development Map.
- (6) Land with a slope of twenty percent (20%) or greater.

B. In order to reduce the adverse impact of a development affecting the above-defined

lands, the Commission may require the redesign of the subdivision, including road alignments, lot lines, lot area, the location and scale of structures and the location of reserved open space.

170-30. Lots, lot layout and building setback.

- A. Minimum lot area and other dimensional requirements shall be as required by the Barkhamsted Zoning Regulations. Special use permit requirements for rear lots in a subdivision are as set forth in Chapter 193, Zoning Regulations.
- B. No lot shall be approved unless it has the required lot frontage on an existing public Road or proposed subdivision road. Every lot shall be of sufficient area with a shape and terrain which will permit a suitable location for all of the following: the building site, septic system leaching fields and reserve fields, including required setbacks, a well water supply source with required separating distances, stormwater retention areas and drainage areas and a driveway corridor.
- C. The buildable area on each lot shall be the area of the lot proposed as suitable for location of the building site, septic leaching fields (including reserve fields), the well site and the driveway corridor. The buildable area, showing each of these locations, shall be clearly defined.

170-31. Solar access.

Applicants are encouraged to utilize energy-efficient patterns of development and land use

of solar and other renewable forms of energy and energy conservation.

- A. Applicants shall demonstrate to the Commission that, in developing the subdivision plan, consideration has been given to passive solar energy techniques which would not significantly increase the cost of housing to the buyer. "Passive solar energy techniques" mean site design techniques which maximize solar heat gain, minimize heat loss and provide thermal storage within a building during the heating season

and minimize heat gain and provide for natural ventilation during the cooling season.

- B. Site design consideration shall include but not be limited to house orientation, street and lot layout, vegetation, natural and man-made topographic features and protection or solar access within the development.

170-32. Driveways and access ways.

- A. Driveways shall be so located, designed and constructed as to prevent erosion and prevent excessive road drainage onto driveways or excessive driveway drainage onto the roadways. Low Impact Development techniques are the preferred method of addressing drainage from driveway construction.
- B. Driveway entrances onto state highways and/or collector roads as defined in the Town Plan are discouraged and wherever possible should be laid out and designed to enter onto lightly traveled roads. Where no method of layout other than entrance to a heavily traveled road is possible, driveways serving adjoining lots shall be combined within the road right-of-way wherever possible.
- C. All lots shall have a corridor of land for location of a driveway which is suitable for safe access. The applicant shall show the location of a driveway which meets the standards of the Zoning Regulations.
- D. For proposed driveways in excess of two hundred (200) feet in length or a ten-percent gradient, the Commission may require submission of a driveway construction and drainage plan prepared by a Connecticut licensed professional engineer.

170-33. Fire protection

The following minimum fire protection measures shall apply. Equivalent substitute fire protection measures may be approved by the Commission based on the review and advice of the Volunteer Fire Department.

- A. A twenty-thousand gallon water tank for fire protection shall be required for each subdivision of six (6) or more lots.
- B. A ten-thousand gallon water tank shall be required for five (5) lots.
- C. Tank design and installation. The top of the installed tank shall be four (4) feet below ground level, located parallel to the road, with a thirty inch manhole cover at ground level in the center of the tank. The tank should be concrete, plastic or

fiberglass. The tank shall comply with the Emergency Water Tank requirements in the Appendix.

- D. A suction line shall be provided to the following specifications: six-inch pipe, six inches from the bottom of the tank with four-and-one-half inch (4 ½) inch national fire thread, with the cap eight (8) feet from the curb. The suction line shall pitch back to the tank one-fourth (1/4) inch per foot minimum.
- E. The water tank and site shall be deeded to the Town and shall be parallel to and in addition to the minimum street right-of-way. Water tank locations shall be shown on the subdivision plan and shall be located within a street right-of-way in a location central to the proposed house locations.
- F. The tank design and location shall be reviewed by the Fire Marshal and Fire District.

170-34. Floodplain District regulations.

The Floodplain District includes all special flood hazard areas designated as Zone A, A1-30, on the Flood Insurance Rate Maps (FIRM) and the Flood Boundary and Floodway Maps on file with the Town Clerk. A development permit shall be obtained for any construction or development as required in accordance with Chapter 193, Zoning Regulations.

- A. Standards for subdivision proposals. In all Special Flood Hazard Areas, the following shall apply:
 - (1) All subdivision proposals shall be consistent with the need to minimize flood damage;
 - (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
 - (3) All subdivision proposals shall provide adequate drainage to reduce exposure to flood hazard; and
 - (4) Base flood elevation data shall be provided for all subdivision proposals and other proposed development in Zone A which are greater than five acres or fifty lots.

170-35. Open space.

- A. The Commission may require the reservation of up to ten percent (10%) of the land

included within a proposed subdivision for suitable open space, park or playground use. The land so reserved shall be designed in reference to the recommendations of the Town's Plan of Development.

- B. Open space land shall be chosen on the basis of its value in protecting and conserving natural resources, especially public water supply lands, streambelts, ridgelines and active farmland, and also to enhance living conditions and protect cultural and historic values and to create recreational opportunities, including hiking. Such reserved land shall have road access, where required by the Commission.
- C. Such land shall be permanently protected, preferably by a conservation (or negative) easement prohibiting building development and dedicated to a nonprofit land conservation organization.
- D. Where the land to be protected will be used for active recreational purposes by the landowners within the subdivision, protection may be accomplished by dedicating the land to a common interest community of owners of the lots within the subdivision. Such a community shall be legally established according to procedures and requirements specified in the Connecticut Common Interest Ownership Act C.G.S. *47-200, as amended, and shall be subject to legal review.
- E. Where the Town of Barkhamsted has expressed an interest in establishing public open space or recreation areas, such land should be offered for dedication to the town.
- F. The applicant should present a proposal for the location and use of the land to be reserved, but in all instances the final decision shall be the responsibility of the Commission.

170-36. Easements.

- A. Easements for access to and use of land or other necessary restriction of use of land outside of a street right-of-way shall be provided as required or approved by the Commission and shall be shown on the record subdivision map with adequate survey information so that the land subject to easement may be accurately located by a field survey.
- B. Easements may be required in the following types of cases as applicable to the particular equipment.
 - (1) For access to bridges and culverts with construction and maintenance equipment.
 - (2) For stormwater drainage areas or pipes and mains and appurtenances, if any,

which easements shall be not less than thirty (30) feet in width, and for use and access to stormwater detention basins and fire ponds.

- (3) For temporary construction easements for grading and other construction work in the front twenty-five (25) feet of each lot along a proposed street.
- (4) For sight easements across corners of lots at all street intersections to assure safe lines of sight on the street and to authorize the Town to remove obstructions or regrade within the easement area.
- (5) For access easements at least ten (10) feet in width for pedestrian ways to open spaces, parks, playgrounds, schools and other public or semi-public places where required by the Commission.
- (6) Drainage easements for stormwater drainage areas, pipes and facilities that may need to be provided for or installed in the future to serve undeveloped land within the watershed that normally drains across the area of the proposed subdivision. Easements may also be required where natural prescriptive drainage rights must be altered by land subdivision. Easements for pipesystems shall be located so that the drainage pipe may be positioned in an accessible location within the easement area and at least ten (10) feet from the boundary of such easement.
- (7) Easements for slope rights in cut or fill sections outside of a road right-of-way.

ARTICLE VI

Street Standards and Specifications

170-37. General.

Proposed streets shall be appropriate to the topography and location. Street patterns shall give consideration to contours and natural features and be designed in a manner capable of public use and maintenance by the Town of Barkhamsted.

170-38. Street classification and planning.

- A. Proposed streets shall provide safe and convenient circulation for both present and prospective traffic within the subdivision and within the neighborhood where the subdivision is located.
- B. Streets shall be classified into one (1) of the following categories: local streets or collector streets.
 - (1) Local streets provide access to abutting lots. Traffic on these streets consists primarily of traffic that has destination on the local street.

- (2) Collector streets provide a travel path for through traffic. Collector streets shall be as designated in the Town Plan of Development or by the Planning and Zoning Commission.

(3) No new Town streets are allowed in I-3, Industrial Zone. Private streets shall be approved by the Planning and Zoning Commission and Board of Selectmen. The private street shall be constructed in accordance with the Town of Barkhamsted, Streets Specifications Ordinance, Article II, except 166-14D, private streets in the I-3 zone may be constructed with twenty-four feet of pavement with four foot shoulders in both cut and fill areas, constructed and centered between the limits of a fifty foot right-of-way. The Town Engineer shall review the construction plans at the applicant's expense. **The use of a pre-existing road may be allowed by Special Exception and approved by the Board of Selectmen.** The private street and any other common elements in the subdivision shall be owned by a common interest ownership association in accordance with the Connecticut Common Interest Ownership Act, Chapter 828 of the Connecticut General Statutes. The documents shall be reviewed and approved by the Town Attorney, at the applicant's expense and filed with the Town Clerk, along with the record subdivision map. In addition:

(a) All lot owners shall be a member of COIA or owner's association. Each owner shall have an undivided interest in the private street or other common interest elements;

(b) Applicants shall provide the Commission with copies of the proposed deed covenants. Grantees, heirs, successors and assigns of the property owners shall be obligated and subject to all covenants in the deed, to share with all other property owners in such expenses and these obligations must include all future deeds for the property. The documents shall empower the Town to take all necessary measures to assure compliance with all responsibilities related to the private street or other common elements, including, but not limited to, assessment of the association and individual property owners for all costs incurred for such purposes;

(c) These covenant provisions shall appear on the record subdivision map. It shall be the responsibility of the applicant to legally establish the owner's association, the Common Ownership Agreement or Owner's Association Agreement. Each lot served by a private street shall have a deed restriction indicating that the Town of Barkhamsted is not responsible for maintenance of the private street.

170-39. Design and construction plans.

- A. The design and construction plans for streets and street drainage required by these regulations shall be in accordance with these regulations and Chapter 166, Streets and Sidewalks, Article II, as amended, and shall be recommended for approval, in

writing, by the Board of Selectmen.

- B. All construction of such improvements shall be carried out subject to supervision and inspection by the Board of Selectmen or its authorized agent and shall be built in accordance with these regulations and Chapter 166, Streets and Sidewalks, Article II.
- C. Where there is a conflict between the Road Ordinance and these regulations, the Commission shall decide which requirements shall apply.

170-40. Street access.

- A. All proposed subdivision lots shall meet the lot frontage and access requirements of Chapter 193, Zoning Regulations, and shall have access to a state highway or town-maintained street of sufficient width, grade, condition and design so as to provide an adequate, safe, functional and convenient system for present and prospective traffic, to prevent flooding and icing of streets through proper drainage and to afford ample access to lots for fire-fighting and other emergency vehicles.
- B. Where a subdivision is proposed with access to town streets, the Planning and Zoning Commission may require the applicant to submit as part of the subdivision application a traffic and road safety impact analysis. This analysis shall be prepared by a professional engineer (PE) qualified in traffic, transportation and roadway analysis. The Commission may also require a review and assessment of the existing road condition from the Board of Selectmen and the Town Engineer.
- C. If the Commission concludes that the town street access to the subdivision does not meet the above criteria, this finding may be the basis for denial of the subdivision application.

170-41. Continuation of streets into adjacent property.

The layout of the proposed subdivision shall provide for the continuation of the construction of the street to the property line of the adjacent property, except where:

- A. The adjacent property has been developed or is approved for development and the Commission finds that the existing or approved street layout and/or the density of development on the adjacent property will not permit such an interconnection, or
- B. The total number of existing or proposed potential lots on the adjacent property is twenty (20) or less and the Commission determines that there is no public safety need for an interconnecting street, or

- C. The majority of the adjacent property is protected open space or recreational land, farm land protected under the State Purchase of Development Rights program, M.D.C. owned land or land protected by a non-profit land trust either in fee or by conservation easement, or
- D. Based upon an analysis of the soils and topography on the adjacent property, provided by the applicant, the Commission determines that it is generally not suited for development by the extension of the proposed subdivision road because the following conditions exist:
- such street extension and related lot development would require multiple crossings or stream crossings, and/or
 - such street extension and development would require crossing land with a slope in excess of 10% for,
 - distances in excess of 300 feet and construction requirements of these regulations, and/or
 - such street extension and development would require construction in soils which are predominantly shallow to bedrock soils and would necessitate extensive blasting, and
 - there is potential alternative road or driveway access to the adjacent property along a road and/or driveways connected to a town maintained street
 - and it will not have a significant adverse effect on adjacent property or on public health and safety.
- E. The information presented by the applicant shall be prepared by a qualified engineer. The Commission shall consider the information submitted by the applicant and any other applicable information.

170-42. Dead-end streets.

- A. Where a street does not extend to the boundary of the subdivision and its continuation will not be required for future access to adjoining property, its terminus shall not be nearer to such boundary than one hundred (100) feet. (A turnaround shall be provided at the end of a permanent dead-end street.)
- B. Reserve strips of land shall not be left between the end of a permanent dead-end street and an adjacent piece of property. However, the Commission may require the provision of a twenty-foot-wide passageway or easement to accommodate pedestrian traffic or utilities.

170-43. Monuments and pins.

- A. Street monuments shall be provided in accordance with Chapter 166, Streets and Sidewalks, Article II.
- B. In addition to required monuments, iron pins, not less than three-fourths (3/4) inch in diameter and thirty-six (36) inches in length, consisting of a suitable rod or pipe, shall be placed at each point of intersection of a lot line and the right-of-way line of a street and at all other lot corners and shall be installed in a manner conforming to standards of the Connecticut Association of Land Surveyors. Monuments may be substituted for iron pins. Pins, however, are not required at each change in direction of an irregular lot line, such as along a stream or stone wall.

170-44. Street trees.

Where the Commission determines there are insufficient existing trees within the proposed subdivision, it may require the planting of additional street trees. In general, street trees shall be planted approximately fifty (50) feet apart on both sides of any street, subject to variation approved by the Commission. Trees to be planted shall be at least three (3) inches in diameter at breast height and shall have a minimum height of ten (10) feet. The species of trees shall be subject to the approval of the Commission. Existing trees along the proposed street which conform to these requirements may be substituted for new trees at the discretion of the Commission.

170-45. Underground utilities.

Electric and telephone lines and facilities shall be installed underground wherever feasible and appropriate.

170-46. Street names.

All street names shall be subject to review and approval by the Commission.

ARTICLE VII
Storm Drainage and Stormwater Management Standards

170-47. General stormwater management objectives.

The stormwater management program shall be planned to address the following objectives:

- A. To achieve a zero (0) increase in peak rate of runoff leaving the property, except where it is shown that such an objective will result in an adverse impact.
- B. To minimize the impact on downstream properties.

C. To prevent channel erosion and unstable conditions.

D. To maintain water quality.

E. To maintain environmental quality.

F. Utilize Low Impact Development techniques whenever feasible. The stormwater management plan shall include design considerations for best management practices (BMP's) during the construction phase.

170-48. Conditions requiring a stormwater management system.

A. Stormwater management plans shall be developed for all new subdivisions, including phased subdivisions that meet the following criteria:

- Any development resulting in the disturbance of greater than or equal to one acre of land;
- Residential development consisting of 5 or more dwelling units;
- Residential development consisting of fewer than 5 dwelling units involving the construction of a new road or reconstruction of an existing road.
- Residential development consisting of fewer than 5 dwelling units where imperviousness of the site after construction exceeds 30 percent.
- Stormwater discharge to wetlands/watercourses or in areas designated by the Town of Barkhamsted as Aquifer Protection Areas.
- Land uses or facilities with potential for higher pollutant loadings such as industrial facilities subject to DEP Industrial Stormwater General Permit or U.S. EPA National Pollution Discharge Elimination System (NPDES) Stormwater Permit Program, vehicle salvage yards and recycling facilities, vehicle fueling facilities, vehicle service, maintenance and equipment cleaning facilities, fleet storage areas (cars, busses, trucks, public works), commercial parking lots with high intensity uses (shopping center, fast food restaurants, convenience stores, supermarkets), public works storage areas, road salt storage facilities, commercial nurseries, flat metal rooftops of industrial facilities, facilities with outdoor storage and loading/unloading of hazardous substances or materials, regardless of the primary land use of the facility or development.
- Industrial and commercial developments which result in 10,000 sq ft or greater of impervious surface.
- New highway, private road, and street construction
- Modifications to existing storm drainage systems.

B. A "disturbed area" means an area where the ground cover is destroyed or removed, leaving the land subject to accelerated erosion. All other developments may be required to provide such systems if deemed necessary to protect the public health,

safety and well-being of the Town. The stormwater management system shall meet the following standards.

170-49. On-site stormwater management.

- A. The stormwater management plans for project sites shall be prepared by a Connecticut licensed engineer so as to minimize any adverse increase to the peak flow rate in the downstream impact areas. This may be accomplished by use of infiltration systems, accelerating runoff to separate hydrograph peaks, short-term detention basins, longer term retention basins, delaying surface runoff with overland flow or swales, reducing impervious areas and other low impact development methods.
- B. There shall be no discharge of stormwater onto or over private property within or adjoining the subdivision unless proper easements and discharge rights have been secured by the applicant. Such easements and rights are transferable to the Town where the discharge includes stormwater from any street.

170-50. Contents of plans.

- A. Stormwater management plans shall include the following where applicable:
 - (1) Watershed identification, surficial geology and land use.
 - (2) An inventory of flood hazard areas as identified by Flood Insurance Studies, historic floods and damages.
 - (3) An evaluation of nearby watercourses, including areas of limited flow capacity, bank or bed erosion, sediment deposition, water quality, principal water uses and users, recreation areas, morphology classification and channel stability.
 - (4) An inventory and evaluation of nearby hydraulic structures, including drains, channels, culverts, bridges, dams and dikes, with information on their flow capacity and physical condition.
 - (5) An inventory of significant flood-water storage areas, including principal impoundments, floodplains and wetlands, in the watershed.
 - (6) A runoff hydrograph analysis of the watershed for floods of an appropriate duration, including a twenty-four hour event, with average return frequencies of two (2), ten (10), twenty-five (25) and one hundred (100) years.
 - (7) The relationship between the computed peak flow rates and gauging-station data, with modification or calibration of the hydrographs to obtain

a reasonable fit where necessary.

- (8) Identification of the peak rate of runoff at various key points in the watershed and the relative timing of the peak flow rates.
- (9) Identification of points in the watershed where hydraulic structures or watercourses are inadequate under existing or anticipated future conditions.
- (10) Recommendations on how the subwatershed's runoff can be managed to minimize any harmful downstream impacts.
- (11) Generalized recommendations for physical improvements for existing or anticipated future problem areas.

12. Location and description of all proposed stormwater controls and Best Management Practices (BMPs) for both construction activities and post construction long-term stormwater control. (i.e. TST, TSB, etc.)

13. Proposed maintenance and operational manual and/or maintenance schedule for any trash hoods, catch basins, or other Best Management Practice (BMP) devices used to treat or store runoff. Plans shall encourage sheet flow or infiltration and treatment of stormwater. Stormwater facilities/structures shall be designed with adequate access for maintenance.

- B. Stormwater management plans for public water supply watersheds shall be coordinated with the Connecticut Department of Health and the local water utility company.

170-51. Analysis of peak discharges.

- A. Peak discharges from design storms with return frequencies of two (2), ten (10), twenty-five (25) and one hundred (100) years shall be analyzed with storm duration equal to two (2) hours and equal to twenty-four (24) hours. The United States Soil Conservation Service hydrology methods (TR-55 and TR-20) must be used to develop hydrographs for projects covering ten (10) acres or more or with watersheds of twenty (20) acres or more.
- B. The modified rational method may be used for smaller watersheds and projects.
- C. Hydrograph evaluations shall be conducted for existing and anticipated land use conditions. The hydrograph analysis shall include the determination of runoff for each subwatershed and routing runoff through storage impoundments and floodplain storage areas. The timing sequence of the runoff must be fully developed. Subwatersheds shall be selected to determine flows at key structures, as well as to determine runoff from areas prone to development.

- D. The analysis must isolate and identify that portion of the peak flow at critical
Downstream points which is due to the project site.
- E. The analysis utilize the TR55 Method to determine all times of concentration.

170-52. Detention facilities.

- A. Detention basin, retention basins and related facilities to temporarily store excess storm runoff may be used to control the peak flow rate and duration of downstream flows when coordinated with the runoff characteristics of the watershed in which they are located and the local site conditions.
- B. Detention facilities shall not be designed with a dam where failure could cause significant property damage or loss of life.
- C. The release rate shall consider the existing and proposed flow rates at the site and downstream channels or structures and the timing of runoff from other subwatersheds within the basin for the base flood.
- D. The waters released from a detention facility shall not increase the peak flow rate at off-site downstream points, unless they have adequate flow capacity for the base flood.
- E. An extended duration detention facility discharging directly into alluvial or eroding channels shall not exceed the bank's full capacity or the two year flood frequency flow, whichever is less, unless it is determined that said channel will be stable.
- F. The DEP Guidelines for Erosion and Sediment Control and the 2004 Connecticut Stormwater Quality Manual, as amended. shall be used as a guide to construction details and materials.

170-53. Infiltration systems.

- A. All drainage systems shall be designed using low impact development techniques to encourage infiltration of runoff into the soil where suitable conditions exist. Stormwater management practices may include one or more of the following: bio retention, oil/particle separators, catch basins, permeable paving materials, catch basi inserts, porous pavement, cisterns, deep sump catch basins, rain barrels, dry detention ponds, rain gardens, filter strips, stormwater ponds, grass drainage swales, underground detention, hydrodynamic separators, underground infiltration, infiltration practices and vegetated buffers. Use of these techniques should be informed by the biological conditions of the site. Infiltration systems should be used where sand and gravel soils are present. The following infiltration devices shall be considered: Infiltration basins and trenches, dry wells, dry well catch basins, porous pipe, porous paving, overland flow and open channels.
- B. Infiltration systems shall be designed based upon the permeability of the underlying soil.

- C. In areas with Class GAA groundwater, the groundwater discharges shall be reviewed by the appropriate water company.
- D. The design of infiltration systems shall consider the effect of sediment deposition and maintenance on infiltration capacity.
- E. The infiltration system shall have a by-pass or overflow system to convey runoff in excess of the system capacity.

170-54. Open channels.

- A. The analysis and design of open channels shall be consistent with the type of channel and its intended purpose. Channels shall be classified as local drainage channels or as watercourse channels, depending on use, and shall be classified as alluvial or nonalluvial based upon their geologic characteristics.
- B. Type A open channels are local drainage channels with primary purpose of conveying urban, parking lot and road runoff from small watersheds, frequently with intermittent flow and limited ecological value, and are intended to convey their design flow within their banks. They shall be designed in accordance with Sections 12.02, 12.03 and 12.04 of the Department of Transportation Drainage Manual, and:
 - (1) Freeboard allowances shall be provided in proportion to the potential damages that could occur in the event of overtopping.
 - (2) The use of impervious linings is discouraged, except for very high velocity flow and steep slopes.

ARTICLE VIII

Performance and Maintenance Guaranties

170-55. Performance guaranty.

In lieu of the completion of required subdivision improvements, including erosion and sediment control measures, previous to the endorsement of a subdivision plan, the Commission may accept a performance guaranty in an amount and with security and conditions satisfactory to it.

- A. Definition. For the purpose of this section, a performance guaranty shall mean one (1) of the following, subject to legal review and the approval of the Commission:
 - (1) A passbook savings account;
 - (2) An irrevocable letter of credit; or
 - (3) Any other form of security satisfactory to the Commission.
- B. Submission. The performance guaranty shall be submitted to the Commission within sixty (60) days after the approval of a subdivision plan. If a

performance guaranty is not filed with the Commission within sixty (60) days, the subdivision approval shall be deemed automatically void.

C. Amounts and coverage.

- (1) The performance guaranty shall be for an amount sufficient to secure to the Town the actual construction and installation of such improvements and utilities. The amount of the performance guaranty shall be set by the Commission and shall include an additional amount for inflation and contingencies.
- (2) The period of coverage of the guaranty shall be determined by the Commission, but shall be not less than one (1) year from the day of approval of the subdivision plan. The Commission, at the request of the applicant, may agree to extend the period of coverage. As a condition for such extension, the Commission may require an increase in the amount of the performance guaranty.

170-56. Form of performance guaranty.

The performance guaranty shall be duly executed on forms provided or approved by the Town, with proper reference to all maps and plans showing the streets, drainage and other improvements covered by the performance guaranty, and shall have attached thereto a copy of the detailed cost estimate. The performance guaranty shall be provided as follows:

- A. A guaranty secured by a passbook savings account shall be accompanied by the following:
 - (1) The savings account passbook;
 - (2) A withdrawal slip in the amount of the guaranty, properly endorsed and made payable to the Town; and
 - (3) A letter from the bank acknowledging that the account has been assigned to the Town for the period established for the construction or installation of the required improvements, plus six (6) months.
- B. A guaranty secured by irrevocable letters of credit shall be provided by a bank or other similar reputable institution subject to the approval of the Commission and subject to legal review. The letter of credit shall be in such form and accompanied by such documents as may be prescribed by the Commission.
- C. A guaranty in such other form as may be approved by the commission after legal review.

170-57. Inspection of improvements.

The Board of Selectmen or other inspector as may be designated by the Commission shall be informed by the applicant in advance of all relevant construction by the

developer and may inspect required improvements during construction to assure satisfactory completion. In the case of the new street (s) or change (s) in existing street (s), the work shall be inspected in accordance with these regulations and Chapter 166, Streets and Sidewalks, Article II, as amended. If the Board of Selectmen or other designated person finds, upon inspection, that any of the required improvements have not been construction and maintained in accordance with the approved plans, he shall notify the applicant and the Commission, in writing, and the applicant shall be responsible for completing or repairing said improvements according to specifications.

170-58. Failure to complete improvements.

Where a performance guaranty has been posted and required improvements have been installed within the terms of such guaranty, the Commission, upon recommendation from the Board of Selectmen, may declare the performance guaranty to be in default and require that all the improvements be installed.

170-59. Partial release of performance guaranty.

When and if the Board of Selectmen determines that a substantial portion of the improvements called for in the subdivision plan has been completed, the Commission may authorize one (1) or more partial releases of a portion of the guaranty, the balance to be sufficient to guarantee completion of the public improvements. Releases shall be granted in amounts in excess of one thousand dollars (\$1,000.00). In no event shall more than seventy-five percent (75%) of the total amount of the performance guaranty be released.

170.60. Final release of performance guaranty.

A performance guaranty will not be finally released until requested, in writing by the applicant and the following conditions have been met:

- A. Certification and acceptance. The Board of Selectmen or the designated inspector has submitted a letter stating that all required improvements have been satisfactorily completed.
- B. As-built plans. The applicant's engineer or surveyor has certified, through submission of detailed as-built plans, that all improvements are in accordance with submitted construction plans for the subdivision. As-built plans shall include plan and profile maps and may, at the discretion of the Commission, include grading plans and erosion and sedimentation control plans. Such plans shall show any modifications or changes made during construction, and one (1) copy of each provided shall be on polyester film (Mylar) which is stamped with a stamp of indelible red ink stating certification.
- C. Maintenance performance guaranty. A maintenance performance guaranty, as described below, where deemed necessary, shall be filed with the Town.

- D. Documents and conditions. Confirmation that all required documents have been furnished to the Commission and all conditions and requirements of its approval, including the placement of lot markers, have been satisfied.

170-61. Maintenance of improvements; snow removal.

The applicant shall be required to maintain all improvements and provide for snow removal on streets, if required, until acceptance of said improvements by the Town.

170-62. Maintenance performance guaranty.

- A. The applicant shall be required to file a maintenance performance guaranty in order to assure the satisfactory condition of the required improvements. In the case of improvements which are not to be offered for acceptance by the Town, the maintenance guaranty must be in effect for a period of fifteen (15) months from the release of the performance guaranty. In the case of improvements which are to be offered for acceptance by the Town, the maintenance guaranty shall be in affect for a period of fifteen (15) months from the release of the performance guaranty or until acceptance of the improvements by the Town, whichever period is lesser. The maintenance guaranty shall be in an amount set by the Commission, but in no case shall be less than ten percent (10%) or more than fifty percent (50% of the amount of the performance guaranty.
- B. The maintenance guaranty will not be released by the Commission until requested, in writing, by the applicant. Such request shall be accompanied by a letter from the Board of Selectman or the designated inspector recommending said release and stating that all required improvements have remained in good condition during the maintenance period.

ARTICLE IX
Waivers

170-63. Completion of Improvements in a Subdivision.

In accordance with State Statute 8-26c, all work in connection with a subdivision shall be completed within five (5) years after the approval of the subdivision plan, the Commission's endorsement of the approval on the plan shall state the date on which such five (5) year period expires.

The Commission may grant an extension or extensions to this five (5) year period provided a written request stating the reasons for the extensions has been received by the Commission prior to the expiration date.

Upon receipt of the request the Commission may convene a public hearing on such a request. The Commission shall state its reasons for granting an extension and shall

publish a notice of its decision. Should the Commission approve a request for extension, the record subdivision map shall be revised to show the date of expiration.

The total period of such extension or extensions shall not exceed five (5) years.

170-64. Waiver authorized; conditions.

The commission may waive any requirements under these regulations by a three-fourths vote of all the members of the Commission in cases where conditions exist which affect the subject land and are not generally applicable to other land in the area, provided that no waiver shall be granted that would have a significant adverse effect on adjacent property or on public health and safety, and provided that the Commission shall state upon its record the reasons for which a waiver is granted in each case, and provided that such waiver meets the following conditions:

- A. The applicant shall complete and submit an application for the waiver;
- B. The applicant shall justify and substantiate the request to the satisfaction of the Commission.
- C. The requested waiver does not violate Zoning Regulations.

APPENDIX

General Notations

The following is a list of the general notations required to be shown on the various maps and plans to be submitted as part of a subdivision application. Other more-detailed notations, which are not listed here, may be required to meet the specifications of the Subdivision Regulations.

- 1. The following information shall be included in the title block to be shown on all maps and plans:

**TITLE BLOCK
TITLE OF THE SUBDIVISION**

Name of
 Landowner: _____
 Name of Applicant: _____
 Zoning District: _____
 Drawn By: _____
 Date: _____ Professional seal: _____
 Dates of revisions: _____

- 2. The following approval and endorsement block shall appear on the record subdivision map and construction plan:

APPROVAL AND ENDORSEMENT BLOCK

APPROVED by the Barkhamsted Planning and Zoning Commission on

Date of Meeting

RECOMMENDED FOR APPROVAL by the Barkhamsted Inland Wetlands Commission

_____ on _____

Signed _____ Date of Meeting

(for all applications involving inland wetlands)

RECOMMENDED FOR APPROVAL by the Barkhamsted Board of Selectman

_____ on _____

Signed _____ Date of Meeting

(for all applications involving proposed streets, improvements to existing streets or other public improvements)

In accordance with State Statute * 8-26c, all work in connection with this subdivision shall be completed by _____.

- 3. Pursuant to Section 170-24E(6), when a subdivision does not include land in the Barkhamsted Floodplain District area, the following notation shall be shown on the record subdivision map: "This subdivision does not include land within the Floodplain District as defined under the Zoning Regulations.
- 4. Pursuant to Section 170-27, where the Commission determines that an erosion and sediment control plan shall be required as a part of a zoning permit application, the following notation shall be shown on the record subdivision map: A detailed erosion and sediment control plan associated with the development of the following subdivision lots (specifying the lot numbers) zoning permit and shall be certified by the Commission or its authorized agent prior to issuance of the zoning permit.

