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CARLISLE PLANNING BOARD

RULES AND REGULATIONS

governing

THE SUBDIVISION OF LAND

January 23, 1989, revised July 8, 1991, January 9, 1995,
September 29, 1997, April 27, 1998, June 10, 2002,
March 8, 2010, and _____, 2013

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CARLISLE PLANNING BOARD
SUBDIVISION RULES & REGULATIONS

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TOWN OF CARLISLE
SUBDIVISION RULES AND REGULATIONS

ARTICLE I
PURPOSE; AUTHORITY

SECTION 1. *Purpose*

These Rules and Regulations are intended to effectuate the purposes of the Subdivision Control Law as set forth in Section 81M of Chapter 41 of the Massachusetts General Laws which states: "The Subdivision Control Law has been enacted for the purpose of protecting the safety, convenience and welfare of the inhabitants of the cities and towns in which it is, or may hereafter be, put in effect by regulating the laying out and construction of ways in subdivisions providing access to the several lots therein, but which have not become public ways, and ensuring sanitary conditions in subdivisions and in proper cases parks and open areas. The powers of a planning board and of a board of appeal under the Subdivision Control Law shall be exercised with due regard for the provision of adequate access to all of the lots in a subdivision by ways that will be safe and convenient for travel; for lessening congestion in such ways and in the adjacent public ways; for reducing danger to life and limb in the operation of motor vehicles; for securing safety in the case of fire, flood, panic and other emergencies; for ensuring compliance with the applicable zoning ordinances or bylaws; for securing adequate provision for water, sewerage, drainage, underground utility services, fire, police, and other similar municipal equipment, and street lighting and other requirements where necessary in a subdivision; and for coordinating the ways in a subdivision with each other and with the public ways in the city or town in which it is located and with the ways in neighboring subdivisions."

SECTION 2. *Authority*

These Rules and Regulations are adopted under the authority vested in the Planning Board of the Town of Carlisle by Section 81Q, Chapter 41 of the Massachusetts General Laws, as now existing or hereafter amended. In accordance with Section 81R, the Planning Board may in any particular case, where such action is in the public interest and not inconsistent with the intent and purpose of the Subdivision Control Law, waive strict compliance with its Rules and Regulations.

Note: Chapter 41, Section 81K et seq. of the Massachusetts General Laws is the enabling act for Municipal Planning and Subdivision Control.

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ARTICLE II
GENERAL

Carlisle's land use plans and regulations reflect the development goals and desires of Carlisle's citizens as expressed through Carlisle Town Meeting and the Town's many land use boards, departments and committees, as well as the informed input of the Town's professional staff. These plans and regulations articulate the Town's land use vision as expressed in density, setback, design and environmental performance standards.

The Planning Board has promulgated various regulations pertaining to development applications within its jurisdiction, such as relating to Subdivisions, Conservation Clusters, Senior Residential Open Space Communities and Common Driveways. In order to achieve a degree of consistency in the treatment of those developments, as applicable to particular projects and properties, and subject to the Carlisle Zoning Bylaws, applicable law and the specific requirements set forth in each of the regulations applicable to each development ("Specific Regulations"), and to provide additional guidance to applicants, the Planning Board has promulgated Attachment A, *General Development Standards,* which sets forth standards for development that should be applied where applicable in connection with applications to the Planning Board for Subdivisions, Conservation Clusters, Senior Residential Open Space Communities and Common Driveways.

Attachment B, *Policy Governing Use of Town Advisory Groups*, sets forth a procedure available to the Planning Board to initiate a process which will establish a Town Advisory Group to assist the Planning Board, and possibly other land use boards, committees and departments, in addressing any applications before it. The use of this advisory group is intended to formally facilitate the coordination of communication between and among Carlisle's land use boards, committees and departments and to provide meaningful input to the applicant.

Attachment C, *Agreement for Reimbursement of Expenses and Certification of Accuracy of Application*, sets forth a form to be used in all applications before the Planning Board pursuant to M.G.L., Chapter 44, Section 53G.

Attachment D, *Construction Management Plan*, sets forth a list of issues to be addressed for every development in Town of four or more residences, or a subdivision of land into four or more Lots, or a non-residential development, during each stage of construction, to the extent applicable, to safeguard the public health and safety, to maintain Ways against extraordinary wear or damage, and to minimize the impact of construction operations on the quality of daily life in the Town.

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SECTION 1. *Definitions*

The definitions of the Subdivision Control Law are incorporated herein (M.G.L., Chapter 41, Section 81L), unless expanded or clarified in the following. Other terms and words and phrases not defined herein or in the Subdivision Control Law shall be construed according to the common and approved usage of the language, but technical words and phrases and such others as may have acquired a particular and appropriate meaning in law shall be construed and understood according to such meaning.

"AASHTO" shall mean American Association of State Highway and Transportation Officials.

"Applicant" shall mean the Owner (as hereinafter defined) of the land referred to in an Application filed with the Board or the Owner's duly authorized representative.

"Board" shall mean the Planning Board of the Town of Carlisle.

"Collector Road/Street" shall mean a Road designed to provide access into a particular neighborhood or region of the town. While there may be through traffic present, the majority of the traffic has its origin or destination within the neighborhood or local area. Such Roads typically allow for travel speeds between 25 and 30 miles per hour. Examples: Rutland Street, Brook Street, Russell Street, Stearns Street

"Cul-de-Sac" shall mean a vehicular turnaround at the closed end of a Dead-end Street.

"Dead-end Road/Street" shall mean that portion of a Street or Street system to which access would be denied by closure of the Street or Street system at a single point.

"Definitive Plan" or "Definitive Subdivision Plan" shall mean a plan of Subdivision submitted pursuant to Section 81T, Chapter 41 of the Massachusetts General Laws.

"Footpath" shall mean a meandering paved or compacted surface for foot and bicycle travel, usually following the approximate alignment of a Road/Street, and generally within Street Rights-of-way.

"Local Road/Street" shall mean a Road designed to provide access to and from the abutting properties and for traffic that has its origin or destination in the immediate neighborhood and not designed to accommodate through traffic. This includes both Dead-end Roads and also non-Dead-end Roadways in a Subdivision. Such Roads typically allow for travel speeds between 20 and 30 miles per hour. Examples: Carleton Road, Hutchins Road, Munroe Hill Road.

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"Lot" shall mean an area of land in one ownership, with definite boundaries, used or available for use as the site of one or more buildings.

"Major Arterial Road/Street" shall mean a Road that primarily serves traffic flows not originating directly along it. It carries traffic through town and/or provides a connection between one portion of town and another. Its design accommodates travel speeds of 35 miles per hour or greater. Examples: Bedford-Westford Roads and Concord-Lowell Roads.

"Minor Arterial Road/Street" shall mean a Road similar to a Major Arterial Road/Street but with lower through traffic volumes, a higher percentage of traffic originating along it or along Streets off of it and with travel speeds lower than 35 miles per hour. Examples: Acton Street, Cross Street, Curve Street, Maple Street, and South Street.

"Owner" shall mean the person holding the ultimate fee simple title to a Parcel, tract, or Lot of land as shown by the record of the appropriate Land Registration Office, Registry of Deeds, or Registry of Probate.

"Parcel" shall mean an area of land with definite boundaries that is not a "Lot."

"Parties in Interest" shall mean all abutters, owners of land directly opposite on any private or public Street or Way; and abutters to the abutters within three hundred (300) feet of the property line of the property subject to an Application submitted to the Board as they appear on the most recent applicable tax list, notwithstanding that the land of any such owner is located in another city or town, unless the Applicant has knowledge of any subsequent changes.

"Preliminary Plan" or "Preliminary Subdivision Plan" shall mean a plan of Subdivision submitted pursuant to Section 81S, Chapter 41 of the Massachusetts General Laws.

"Right-of-way" or "Way" shall mean the full strip of land shown on a plan of Subdivision as consisting of, or available for future use as, a Roadway, including the area to be used for planting strips, sidewalks, and utilities. Such Right-of-Way or Way shall be available only for such uses as are customary for Rights-of-Way or Ways in the Town and shall not be available for any private construction such as buildings, fuel tanks, septic tanks, fences or walls.

"Road or Street" shall mean any present Town Road or Street, or any Street that is planned for future Town acceptance, and includes the entire Right-of-way.

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"Roadway" is defined as that portion of the Street that has been specifically improved by paving or graveling to permit vehicular travel.

"State Construction Standards" shall mean those specifications that are published by the Massachusetts Highway Department and are entitled Standard Specifications for Highways and Bridges, and including all supplements, updates, revisions or future editions covering substantially the same subject matter.

"Subdivision" shall mean a division of land into one or more Lots in such a manner as to constitute "subdivision," as defined in Section 81L, Chapter 41, of the Massachusetts General Laws, as now existing or hereafter amended, and shall include resubdivision as therein provided, and, when appropriate to the context, shall relate to the process or the land subdivided.

"Subdivision Control Law" shall mean Sections 81K-81GG, inclusive, Chapter 41 of the Massachusetts General Laws, and the acts and amendments thereof or in substitution thereof.

SECTION 2. *Unapproved Subdivision Prohibited*

No person shall make a Subdivision of any land within the Town of Carlisle, or proceed with the improvement or sale of Lots in a Subdivision, or the construction of Streets and Ways, or the installation of any services therein, unless and until a definitive plan of such Subdivision has been submitted to and approved and endorsed by the Board as hereinafter provided.

All proposed Lots within a Subdivision shall comply with the Zoning Bylaws of the Town of Carlisle.

SECTION 3. *Procedures/Fees*

A. Filing

Plans intended for review at a regular meeting of the Board shall be filed pursuant to the Subdivision Control Law.

B. Fees

The Board may adopt and from time to time amend, without the need for a public hearing, a schedule of fees ("Fee Schedule") for the administration of these Rules and Regulations. Said Schedule, as it may be so amended, shall be attached as Exhibit F to these Rules &

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Regulations as a convenience for those who seek to utilize it, but shall not be deemed to be a part thereof or incorporated therein. No application or request shall be considered complete unless accompanied by the required fees and a signed copy of Attachment C, *Agreement for Reimbursement of Expenses and Certification of Accuracy of Application*.

(1) The Board may assign, as its agents, appropriate Town agencies or officials and may from time to time hire consultants to review plans and inspect improvements at the cost of the Applicant.

(2) When reviewing an Application for approval of, or when conducting inspections in relation to, any Approval Not Required Plan, Preliminary Plan or Definitive Plan, the Board may determine that the assistance of outside consultants is warranted due to the size, scale or complexity of a proposed project, because of a Subdivision's potential impacts, or because the Town of Carlisle lacks the necessary expertise to perform the work related to the approval. The Board requires that Applicants pay a "Project Review Fee" as set forth on the Fee Schedule, consisting of the reasonable costs incurred by the Board for the employment of outside consultants engaged by the Board to assist in the review of a proposed Subdivision or inspection of an approved Subdivision. The scope and cost of such consultant may exceed the normal costs generally covered by the Project Review Fee as set forth in the attached Fee Schedule. To cover the cost of these reviews, an additional review fee deposit may be required by the Board at the time of submission or at any time during the review or inspection process.

(3) In hiring outside consultants, the Board may engage engineers, planners, lawyers, urban designers or other appropriate professionals who can assist the Board in analyzing a project to ensure compliance with all relevant laws, bylaws, and regulations. Such assistance may include, but not be limited to, analyzing an Application, monitoring or inspecting a project or site for compliance with the Board's decision or regulations, or inspecting a Subdivision during construction or implementation.

(4) Funds received by the Board pursuant to this section shall be deposited with the municipal treasurer who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the Board without further appropriation. Expenditures from this special account shall be made only for services rendered in connection with a specific Subdivision for which a project review fee has been or will be collected from the Applicant. Accrued interest may also be spent for this purpose. Failure of an Applicant to pay any fee required hereunder shall be grounds for disapproving a Subdivision, or rescission of an approval of a Subdivision.

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(5) At the completion of all procedures authorized or required under these Rules and Regulations, an accounting shall be made and any excess amount in the account, including interest, attributable to a specific project shall be repaid to the Applicant or the Applicant's successor in interest. A final report of said account shall be made available to the Applicant or the Applicant's successor in interest. For the purpose of this regulation, any person or entity claiming to be an Applicant's successor in interest shall provide the Board with documentation establishing such succession in interest.

(6) The Applicant shall reimburse the Town for all expenses incurred in connection with the review of the conceptual, Preliminary or Definitive Plan or Approval Not Required Plan and verification of compliance with the requirements of the Board relative to said plan and its execution in excess of the initial amount paid pursuant to this Section 3. Such expenses shall include, but are not limited to, the cost of services of engineers, surveyors and attorneys, the cost of publication of required public notices and the cost of recording and/or verifying the recording of the plan and associated documents.

(7) Any Applicant may take an administrative appeal from the selection of the outside consultant to the Board of Selectmen. Such appeal must be made in writing and may be taken only within twenty (20) days after the Planning Board has mailed or hand-delivered notice to the Applicant of the selection. The grounds for such an appeal shall be limited to claims that the consultant selected has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications shall consist either of an educational degree in, or related to, the field at issue or three or more years of practice in the field at issue or a related field. The required time limit for action upon an application by the Board shall be extended by the duration of the administrative appeal. In the event that no decision is made by the Board of Selectmen within one (1) month following the filing of the appeal, the selection made by the Planning Board shall stand.

SECTION 4. ***Plan Not Believed To Require Subdivision Approval***

A. Submission of Plan

Any person who wishes to cause to be recorded in the Registry of Deeds or to be filed with the Land Court a plan of land and who believes that said plan does not require approval under the Subdivision Control Law must:

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(1) File with the Planning Board at a regular or special meeting of said Board, with a copy to the Town Clerk, an application Form A, properly executed by the Applicant and in duplicate (see Exhibit A, attached);

(2) Submit, with Form A, one (1) Mylar drawing of the plan and nine (9) contact prints thereof, plus a digital copy thereof in a format acceptable to the Board, as well as a GIS-shapefile, transmitted and/or provided on a digital storage media acceptable to the Board, prepared by a registered land surveyor, to the Board accompanied by the evidence necessary to show that the plan does not require approval under the Subdivision Control Law; and

(3) Pay to the Town of Carlisle, upon filing of said Form A, a non-refundable filing fee set forth on the Fee Schedule and, if requested by the Board, the Project Review Deposit and a signed copy of Attachment C, *Agreement for Reimbursement of Expenses and Certification of Accuracy of Application*.

B. Contents of Plan

(1) The dimensions of said plan shall be as required in "Plan Regulations of the Registry of Deeds" in effect at the time the plan is submitted to the Board. Each plan submitted to the Board shall contain at least the following:

(a) Identification of the plan by name and address of Owner, location of the land in question (with a true North arrow) and, if different, the name of the Applicant.

(b) The statement "Approval Under Subdivision Control Law Not Required", and sufficient space for the date and signatures of all members of the Board.

(c) The zoning classification of the land that contains the property and location of any zoning boundary lines or overlay districts that lie within the area, including the overlay Wetland/Flood Hazard District.

(d) The entirety of any Lot having its boundaries changed must be shown.

(e) Notice of any decisions by any local, state or federal boards, commissions, departments or agencies, including, but not limited to, the Board of Appeals, the Conservation Commission and the Board of Health,

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including, but not limited to variances and exceptions regarding the land or any buildings thereon.

(f) Names of all abutters as they appear on the most recent applicable tax list, unless the Applicant has knowledge of any subsequent changes.

(g) Distance to nearest public or private Way, or to other permanent monument.

(h) Location of existing buildings and improvements on the Lot and their distance to the nearest property line and the setback and side and rear yard designation and the location of any easements (together with the recording information for such easements), wetlands, trails, Footpaths, water courses and other significant natural features.

(i) For each proposed Lot, boundary lines, area, dimensions, the ellipse required by Section 4.1.3.3 of the Town of Carlisle Zoning Bylaws and, if applicable, the circle required by Section 4.1.2.4.3 of the Town of Carlisle Zoning Bylaws.

(j) Signature and seal of the registered land surveyor who prepared the plan.

(k) Assessor's map and Parcel number for the Lots shown on the plan.

(l) A locus plan having a scale of one (1) inch equals two hundred (200) feet (1"=200') showing boundaries of the Lots.

(m) The plan should state that "No determination of compliance with zoning requirements has been made or intended," or words of similar import.

C. Board Determination

(1) If the Board determines that the plan does not require approval, the Board or its authorized agent shall, without a public hearing and within twenty-one (21) days of complete submission, endorse the Plan in the signature block required under Section 4(B)(1)(b). Such endorsement shall not be deemed to constitute any determination of compliance with the requirements of the Zoning Bylaws or the General Bylaws of the Town of Carlisle. The signed original of the plan shall be

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returned to the Applicant, and the Board shall notify the Town Clerk, in writing, of its action.

(2) If the Board determines that the plan does require approval under the Subdivision Control Law, it shall give written notice of its determination to the Town Clerk and the Applicant. The Applicant may then submit a plan for approval as provided by the Subdivision Control Law and these Rules and Regulations, or he may appeal from such determination to the Superior Court in accordance with the Subdivision Control Law.

(3) If the Board fails to act upon a plan submitted pursuant to this Section 4 within the time period described in 4(C)(1) above, the plan shall be deemed approved and a certificate to that effect shall be issued by the Town Clerk.

SECTION 5. *Procedure For The Submission And Approval Of Conceptual And Preliminary Subdivision Plans*

A. Conceptual Plan/Discussions

Prior to investing in extensive professional design efforts for Subdivision plans, it will often prove useful to review the proposed development of a Parcel of land with the Board, in order that general approaches and potential problems can be freely explored. It is strongly recommended that such discussions take place prior to submission of a Preliminary Plan or a Definitive Plan. Pencil sketches, which need not be professionally prepared, will assist the discussion and might show some, but not all, of the information shown on a Preliminary Subdivision Plan. The Planning Administrator and/or the Board will be available to discuss the general concept and alternatives to minimize negative development impact. It is also recommended that the Applicant present a Development Impact Report, as set forth in Exhibit D, attached hereto, as early as possible.

(1) Before submitting a Preliminary or Definitive Subdivision Plan for approval as hereinafter prescribed, any person may, at his/her own election, submit to the Board, for discussion purposes only, an informal conceptual plan, showing a proposed Subdivision in a general way. Such a plan shall not be designated as a "Preliminary Plan," nor given any approval by the Board (tentative or otherwise), unless it is prepared and submitted in accordance with the detailed requirements of statute applicable to a "Preliminary Plan" and with the pertinent requirements of these Rules and Regulations.

(2) The preparation and submission of such a conceptual plan is strongly recommended, except in the simplest cases of land subdivision. It affords the

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Applicant the opportunity to have the Board and staff review the proposed Subdivision on an informal basis before the expenditure of time and money for detailed engineering work necessary to prepare either a Preliminary Plan or a Definitive Plan.

(3) The Board may, at the request of the Applicant, schedule a brief discussion of the conceptual plan with the Applicant and/or his/her representatives at a regular or special meeting. Such discussion will not constitute a public hearing, but the Applicant is encouraged to notify Parties in Interest so that the input of Parties in Interest may be considered at the conceptual stage of the plan. The Board also strongly suggests that the Applicant seek input from other Town boards, commissions and other Town officials, including, but not limited to, the Fire Chief at this point in time.

(4) The criteria upon which review, comment and discussion regarding informal plans and proposals shall include, in general, the design standards set out in Article III of these Rules and Regulations, generally accepted planning and engineering practice, and, specifically, the action recommendations contained in A Study Plan for the Town of Carlisle, as adopted by Town Meeting in April, 1995 and as it may subsequently be amended.

B. Preliminary Subdivision Plan

(1) Purpose

A Preliminary Plan of a Subdivision may be submitted by the Applicant to the Board and to the Board of Health for discussion and tentative approval, modification, or disapproval by the Board. The submission of a Preliminary Plan will provide the means for the Applicant, the Board, Town agencies and Parties in Interest to discuss and clarify any of the issues of such Subdivision before a Definitive Plan is prepared. Therefore, it is strongly recommended that a Preliminary Plan be filed in every case.

Prior to the discussion of the Preliminary Plan with the Board, the Applicant should discuss his or her plans with the Chief of the Fire Department, the Board of Health, the Conservation Commission, the Pedestrian and Bike Safety Advisory Committee and the Chief of Police. Pursuant to the Subdivision Control Law, the filing of a Preliminary Plan in the case of a non-residential Subdivision is required.

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(2) Submission

Any person who wishes to apply for approval of a Preliminary Subdivision Plan shall file with the Board by hand delivery or registered mail the following:

(a) Four (4) copies of a properly executed application Form B, attached as Exhibit B (and one (1) copy to the Board of Health);

(b) Four (4) contact prints of the Preliminary Plan in the form set forth below, a digital copy thereof in a format acceptable to the Board transmitted and/or provided on a digital storage media acceptable to the Board, plus eight (8) copies of the Preliminary Plan reduced to fit legibly on 11" x 17" or 8 1/2" x 11" sheets;

(c) A non-refundable Preliminary Plan Application Fee as described on the Fee Schedule, which fee does not cover expenses incurred by the Board for professional services of engineers and attorneys in connection with review or inspection of the plan, associated documents and the Subdivision;

(d) A Project Review Fee in the amount set forth on the Fee Schedule, which may be refundable pursuant to Section 3(B) above, and a signed copy of Attachment C, *Agreement for Reimbursement of Expenses and Certification of Accuracy of Application*;

(e) The Applicant shall also file, by hand delivery or registered mail, a notice with the Town Clerk stating the date of submission for such tentative approval of said plan, and accompanied by a copy of the completed Application.

(3) Contents of Preliminary Plan

The Preliminary Plan shall be drawn by a registered engineer or land surveyor in dark lines on a white background, at a suitable scale to fit on a single sheet and it should be properly identified as a Preliminary Plan. It should show sufficient information about the Subdivision to form a clear basis for discussion and for the preparation of a Definitive Subdivision Plan.

(a) The Preliminary Plan shall contain the following information:

(i) Subdivision name, boundaries, north arrow, date, scale, and legend;

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(ii) The names and addresses of the Owners, the Applicant, the name of the engineer or surveyor, and their seals;

(iii) The names of all Parties in Interest;

(iv) The existing and proposed lines of Streets, Ways, easements, wetlands, and any public area within the Subdivision in a general manner;

(v) The location, names and present widths of public or private Ways bounding, approaching or near the Subdivision, together with the location of any Footpaths along such Way(s);

(vi) Existing and proposed drainage system, including existing adjacent natural waterways, in a general manner;

(vii) Existing topography of the land, in a general manner;

(viii) Approximate boundary lines and proposed Lots, with approximate areas and dimensions;

(ix) Estimates of the grades of proposed Streets and profiles, when required by the Board;

(x) Major site features such as existing stone walls, fences, buildings, large trees, historic sites, trails, wooded areas, bridges, outcroppings, swamps, wetlands and water bodies. Special attention should be given to noting physical features that define the boundaries of the Subdivision;

(xi) A locus map at a scale of one (1) inch equals two hundred (200) feet (1"=200') showing the entire Subdivision;

(xii) Evidence and certification of existing zoning and any easements (together with the recording information for such easements), covenants or restrictions applying to the area proposed to be subdivided;

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(b) During the discussion of the Preliminary Plan, the complete information required for the Definitive Plan and the financial arrangements will be developed.

(c) After the regular Board meeting at which a Preliminary Subdivision plan is first discussed, the Board may schedule a field trip to the site of the proposed Subdivision, accompanied by the Applicant or his or her representative. In order to facilitate the field inspection and review of the site of the proposed Subdivision, temporary staking shall be required along the centerline of all proposed Roads in the Subdivision and in locations sufficient to enable the identification of the Lots and Parcels within the Subdivision in time for the field trip. The Board's strong preference is that the Applicant refrain from undertaking any material clearing of the site prior to the Board's field trip to enable the Board and the Applicant to fashion a Subdivision plan that will most likely further the goals set forth in Article III, Section 1(B) of these Rules and Regulations.

(4) Preliminary Plan Action

(a) The Planning Board shall act on the Preliminary Plan within forty-five (45) days of its submission. The Board may approve said Plan, with or without modifications, or disapprove said Plan, stating reasons for such disapproval. Approval, if given, does not constitute approval of a Subdivision. Notice of the Board's action shall be given to the Town Clerk and sent to the Applicant by certified mail.

(b) To ensure that all abutters have the opportunity to discuss any potential problems that may arise through the development of such a Subdivision, before approval, modification and approval, or disapproval of the Preliminary Plan is given, a public meeting shall be held by the Board. A notice of the time and place of the public meeting and of the subject matter to be discussed, sufficient for identification, shall be given by the Board at the expense of the Applicant by advertisement in a newspaper of general circulation in Carlisle not less than ten (10) days before the day of such meeting, and by the Applicant mailing a copy of such advertisement by first class mail to the property owner and to all abutters.

(c) Any Plan submitted by an Applicant to the Board that does not conform to the requirements hereof pertaining to a Preliminary Plan shall not be so designated, nor shall such Plan be given approval by the Board. The submission of the Preliminary Plan for examination by the Board shall

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not be deemed a submission of a Definitive Plan of a Subdivision for approval by the Board, and the action of the Board on such Preliminary Plan shall not prejudice its action on the Definitive Plan.

SECTION 6. *Definitive Subdivision Plan*

Pre-application consultations between the Applicant and the professional staff of the Board are recommended. In addition, as stated in Section 5 above, submission of conceptual and Preliminary Plans is also recommended. When a Preliminary Subdivision Plan has been completely and properly submitted within the past seven (7) months, the Definitive Subdivision Plan shall be substantially the same as the Preliminary Subdivision Plan and shall reflect all modifications required by the Board and the Board of Health and/or the Conservation Commission, or said Definitive Subdivision Plan shall be considered a new submittal.

A. Submission of a Definitive Plan

(1) Any person who submits a Definitive Plan of a Subdivision to the Board for approval shall file by hand delivery or registered mail a notice with the Town Clerk stating the date of complete submission for such approval, accompanied by a copy of the completed application, and shall deliver to the Board the following:

(a) Twelve (12) copies of a properly executed application Form C (see Exhibit C, attached hereto).

(b) Twelve (12) copies of the Development Impact Report (see Exhibit D).

(c) A non-refundable Application Fee as set forth on the Fee Schedule. The Application Fee does not cover expenses incurred by the Board for professional services of engineers and attorneys in connection with review or inspection of the Definitive Plan, associated documents, and the Subdivision (see Article II, Section 3(B)).

(d) A Project Review Fee as set forth on the Fee Schedule and a signed copy of Attachment C, *Agreement for Reimbursement of Expenses and Certification of Accuracy of Application*.

(e) The original drawings of the Definitive Plan, prepared by a registered engineer and a land surveyor, eight contact prints thereof, and a digital copy thereof in a format acceptable to the Board, as well as a GIS-

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shapefile, as applicable, transmitted and/or provided on a digital storage media acceptable to the Board, with contents specified in Article II, Section 6(B).

(f) Sixteen (16) reduced prints of the Definitive Plan on 11" x 17" or 8 1/2" x 11" sheets. Reduced prints will be referred by the Board to other Town officials and committees for review.

(g) A statement from the Owner that he will either retain the fee title in the Streets shown on the Definitive Plan or reserve to himself and his successors, heirs and assigns an easement in said Streets for all purposes for which Streets are used in the Town of Carlisle, and upon construction of the Streets and installation of services will, at the request of the Town, grant to the Town the fee (or an easement for all purposes for which Streets are used) in such Streets; and will, at the request of the Town, grant to the Town any drainage or other easements shown on the plan. In order to retain the fee in the Street, the Owner must clearly define Lot lines when selling individual Lots, to make clear that the Lot stops at the Street Right-of-way.

(h) A list of Parties in Interest certified by the Assessors.

(i) Certification by the Board of Health that a copy of the Definitive Plan has been submitted to the Board of Health pursuant to M.G.L., Chapter 41, Section 81U.

(j) Twelve (12) copies of a written list of any requested waivers with reasons why the granting of each waiver would permit a superior design, would be in the public interest, and would not be inconsistent with the purpose and intent of the Subdivision Control Law.

(k) In the case where the Applicant is a person other than the Owner(s) of the property, the Applicant shall obtain the Owner's signature on the Application indicating that the Owner has knowledge of and consents to the Application. If the Applicant is acting in the name of a trust, corporation, partnership or company, an authorizing vote shall be attached.

(l) A letter authorizing the Town to enter on the Subdivision to complete the Streets and Ways, and services, including, but not limited to, wells, waste disposal and other systems, and other aspects of the plan for

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which the Applicant seeks approval, if the Applicant does not complete them according to its obligations.

(m) A list of mortgage holders which shall be kept current during the period of development.

(n) Lists and copies of variances, permits, and other special permits previously issued by the Town boards or commissions or by any state and/or federal agencies for the subject property, and a list of any variances or permits required to complete the proposed Subdivision. This list should include, but not be limited to, any permits from the Board of Health, the Conservation Commission, the Board of Appeals, the Board, the State Department of Public Works, the Army Corps of Engineers, the State Department of Environmental Protection, and certificates issued by the Secretary of Environmental Affairs under the Massachusetts Environmental Policy Act.

(o) A copy of the most recently recorded plan(s) and deed(s) for all the land included in the Subdivision, bearing the book and page numbers and the date(s) of recording or registration.

(p) Calculations for determining the amount of earth to be removed or the amount of filling to be brought to the site prepared by and showing the seal of a registered professional engineer.

B. Contents of a Definitive Plan

The Definitive Plan shall be prepared by a registered professional engineer and a professional land surveyor registered in Massachusetts and shall be clearly and legibly drawn in waterproof drawing ink on linen, Mylar, or the equivalent. The plan shall be at a scale of one (1) inch equals forty (40) feet (1"=40') or at such other scale as the Board may require to show details clearly and adequately. Sheet sizes shall be 24" x 36". If multiple sheets are used, they shall be numbered and accompanied by an index sheet drawn to a scale of one (1) inch equals two hundred (200) feet (1"=200') showing the entire Subdivision and listing the title and page number on each sheet.

(1) The Definitive Plan shall contain the following information:

(a) A title sheet stating the name of the Subdivision, date including all revised dates, scales, north arrow, names and addresses of the Owner,

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Applicant, designer or engineer, all arranged in a title block in the lower right-hand corner of each sheet comprising the Definitive Plan.

(i) The official date of the Preliminary Plan submission, if any, shall be noted on the title sheet.

(ii) The general layout of the Subdivision drawn to a scale suitable to fit the entire development onto the title sheet shall be placed on the title sheet showing existing and proposed approximate layouts of Streets and Ways, Lot boundary lines, Lot numbers, existing Street names and identification of proposed Streets and Ways, areas to be developed, any open space or buffer or no build areas, other common areas and areas to be left undeveloped within the Subdivision boundaries.

(iii) An index of the Definitive Subdivision Plan shall be placed on the title sheet.

(iv) The number of Lots, the acreage of each Lot and the percentage of each Lot that is anticipated to be covered by a building or structure and the percentage of any wetlands as discussed in Article II, Section 6(B)(1)(l) below shall be listed on the title sheet. The plan shall further show the anticipated location of the principal building for each Lot.

(b) A bar scale shall be provided on all sheets.

(c) The sheet number and the total number of sheets is to be noted in the lower right-hand corner of the title sheet on each sheet (example: Sheet 3 of 7). All sheets shall have the current revision date for ease of reference.

(d) Where the Owner also owns or controls unsubdivided land adjacent or across the Street from that shown on the Definitive Plan, the Applicant shall submit a sketch plan showing a possible or prospective Street layout and the present drainage, natural and constructed, for such adjacent land, unless such plan has already been submitted to the Board with a Preliminary Plan.

(e) Boundary lines of bordering adjacent land or of land across an adjoining Street from property being subdivided and names of Parties in Interest.

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(f) Existing and proposed Streets, Ways, Roads, guard rails (including details of the type and specifications), sidewalks, fire lanes, Footpaths, trails, cart paths, woodspaths, easements (with recording information), and any public or common areas within or adjacent to the Subdivision. The names of proposed Streets (a) shall not conflict with existing Road names, unless they are direct extensions of an existing Roadway; and (b) shall be appropriate to the site, such as, but not limited to, names of Native Americans, early settlers, or natural features associated with the site.[1]

(g) Existing site features, which include but are not limited to: stone walls; buildings or other improvements or structures; bridges; dams; wells; waterways; prominent rock outcroppings; large erratic boulders; ancient cellar holes; boundary marking stones, corner monuments, guide posts or road stones; historical landmarks or structures or buildings; flood plains; drainage courses; ponds; any species occurring on the site that is listed by the Massachusetts Natural Heritage Program as endangered, threatened, and/or of special concern, or as rare native plants; underground and above ground storage tanks; wastewater disposal systems; archaeological sites; scenic vistas; and any paved areas. Indicate whether any existing structures or other improvements will remain or be removed. With respect to any water bodies and water courses, the Applicant shall include the depth of the water and the direction of flow within or adjacent to the proposed Subdivision.

(h) Location of any zoning boundary lines that lie within the area, including the overlay Wetland/Flood Hazard District, and the zoning classification of the land that contains the Subdivision.

(i) Existing topography of the entire Subdivision at a two-foot contour interval or as otherwise required by the Board, and at one (1) foot intervals within a wetland/flood hazard district if any construction will occur therein. If no construction is to occur in a wetland/flood hazard district, two (2) foot contours are acceptable unless otherwise required by the Board.

(j) Location, names, direction and present widths and grades of public and private Ways bounding, approaching or within reasonable proximity of the Subdivision, and the location of any Footpaths along any such Way.

[1] A useful resource is the map of Carlisle with historical names, available in the Planning Board files

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(k) Location of all permanent monuments, properly identified as to whether existing or proposed.

(l) All the wetlands and wetland buffer area boundaries and resource areas and their associated buffer zones as defined in the Wetlands Protection Act, M.G.L., Chapter 131, Section 40, and the Carlisle Wetlands Bylaws and boundaries subject to the Rivers Act, M.G.L., Chapter 131, Section 40 and all 100- and 500-year flood plain boundaries.

(m) Footprint and area of all existing buildings and structures within the Subdivision. In order to assist the Board to conceptualize the proposed Subdivision, the Applicant, for informational purposes, shall provide an overlay showing the location of the proposed structures, buildings, septic systems and the location of the proposed driveways. The location of such proposed improvements shall not be binding and shall not become a part of the Definitive Subdivision Plan.

(i) If requested by the Board, the proposed Lot grading shall be shown on the Definitive Plan so that the proposed stormwater management system can be properly evaluated. The grading for the driveway(s) and their relationship to the intersecting Street or Way shall be shown.

(ii) Dimensions for buildings and structure setbacks; distances between buildings; setbacks from the boundaries of each Lot; building heights and all other dimensions necessary to easily determine compliance with the dimensional requirements of the Zoning Bylaws shall be included. Dimensions and setbacks of any accessory buildings, and any areas intended for (outdoor) storage with purposes identified.

(n) All proposed Lots shall be designated numerically and in sequence. The Applicant shall be consistent in its labeling of Lots and Parcels within the Subdivision.

(i) For each proposed Lot: area, dimensions, the ellipse required by Section 4.1.3.3 of the town of Carlisle Zoning Bylaws and, if applicable, the circle required by Section 4.1.2.4.3 of the Town of Carlisle Zoning Bylaws.

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(ii) The entire area of each Lot within the Subdivision shall be shown on a single sheet with the Subdivision Lot lines shown.

(o) Subdivision boundaries with bearings and distances. The boundaries of the Subdivision and all Street Rights-of-way shall be drawn with 1.2 mm wide lines. Lot boundary lines which are internal to the Subdivision and not common to a Street Right-of-way shall be drawn with 0.3 mm wide lines.

(p) Proposed location and type of system of storm drainage, including any appurtenances, including notes on the construction materials of any pipes, culverts, catch basins or any other system component. Sufficient information relating to placement of the drainage system components (roaming invert elevations, pipeslips, amount of cover, etc.) shall be shown so that the operation of the system can be evaluated. Any retention and/or detention ponds intended to be constructed shall be shown fully dimensioned.

(i) Detail drawings of catch basins, gas trap/oil separation catch basins, headwalls, manholes, box culverts, bridges, retaining walls, and other structures to be constructed in connection with the drainage system designed in accordance with good engineering practices acceptable to the Board shall be shown.

(q) Sufficient data to determine readily the location on the ground, the compass bearing, and length of every Street and Way line, Lot line and boundary line. (All bearings shall be referred to the true meridian.)

(r) Suitable space to record the action of the Board and the signatures of the members of the Board (or officially authorized person) on each sheet of the Plan and to record or make reference to the decision or Certificate of Action of the Board, any restrictive covenants given under M.G.L., Chapter 41, Section 81U, or any amendments thereto, and any conditions required by the Board of Health.

(i) On each Definitive Plan to be recorded, the following statements shall be noted:

Where the Applicant elects to secure the construction of Ways and the installation of municipal services by a

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covenant, there shall be a notation lettered on the plan, above the space for signatures, as follows:

Approved **[date]** subject to the provisions set forth in a covenant, executed **[date],** to be recorded/registered herewith.

(s) If applicable, proposed boundaries of each development phase clearly showing the specific limits of construction for each phase and detailing the work to be accomplished in each phase; interim curbing, pavement and landscaping shall be shown as needed between phases.

(t) Location of storage tanks for fuel or other chemicals or hazardous materials or waste storage, including the tank types, capacities, age and condition.

(u) Location and type of existing and proposed water services including wells. The proposed location of each well must be shown in addition to its setback from any building, structure or wastewater disposal system.

(i) Location of subsurface test pits and percolation tests as required by the Board of Health and a log of the deep test holes and percolation tests for the entire site as witnessed by a representative of the Board of Health.

(ii) The Board may require subsurface soil information to evaluate the adequacy of the Roadway design. Such information may include test pits, borings, or probings along each proposed Roadway, primarily at locations such as cut sections, areas of questionable foundation material, and areas of potentially high groundwater elevations. The requirement for and location of test points shall be established by the Board during the Preliminary Plan approval process. If a Preliminary Plan did not precede a Definitive Plan submittal, test pit data will be required at locations every three hundred and fifty (350) feet along Roadway centerlines or a minimum of two equally spaced test pits along the proposed Roadway, plus areas where the proposed grade is three feet or more below existing grades, and probings will be required along the centerline and sideline at twenty-five (25)-foot intervals where the Roadway crosses wetlands or other areas of unsuitable material.

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Borings and test pits shall be to a depth at least four feet below proposed finished grades and shall be of sufficient depth to determine the extent of unsuitable materials. The logs submitted to the Board shall indicate their location and ground elevation, a classification of the soil strata by depth, depth at which groundwater or rock is encountered, if any, and the date of the test.

Probings shall show the depth of unsuitable material and shall indicate the existing ground elevation. Locations of each probing shall be indicated with respect to the Roadway stations.

All soil information to be submitted to the Board under this subparagraph shall be submitted by a soil evaluator approved by the Massachusetts Department of Environmental Protection (Mass DEP).

(v) Location of all fire hydrants, fire plugs, or cisterns on the site, or distance to the closest ones off-site. If no fire plugs or cisterns are located within the site, then a note shall appear clearly explaining how the Applicant will provide fire protection to the site. Fire hydrants, fire plugs, and all cisterns must meet the requirements of the Carlisle Rules and Regulations governing the Subdivision of Land and any rules or regulations promulgated by the Carlisle Fire Department and their final approval shall be in writing and on file with the Board from such agencies prior to approval of the Definitive Plan. The location of any proposed fire alarm boxes or other warning systems and any proposed fire lanes shall be clearly shown and identified. Any underground conduit for fire alarm connection shall be shown.

(w) The location and type of any other underground utilities, including, but not limited to, electric, gas, telephone or cable television services. Any emergency power facilities shall also be shown.

(x) Storm drainage runoff calculations used to show stormwater drainage design shall conform to the Mass DEP Massachusetts Stormwater Handbook (latest edition) and shall be prepared by and display the seal of a registered professional engineer.

(i) A comparative hydrological drainage analysis comparing pre- and post-development conditions should be provided. The

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analysis should show that the peak rate of runoff in the post-development condition does not exceed pre-development conditions in the 2-, 10-, 25- and 100-year storm events. In areas where soils are in Hydrologic Group A with a rapid infiltration rate, the first inch of runoff from impervious surfaces shall be infiltrated on site. The calculations should be performed using the Natural Resources Conservation Service TR-55 method using a 24 hour storm, Type III rainfall distribution.

Pipe sizes shall be no less than 12" in diameter. Roadway cross-culverts shall be designed using the rational formula (as described in Seelye's Design Data Book for Civil Engineers, page 18-02, revised Third Edition), based on a 25-year and a 100-year expectancy period. The Engineer of Record shall demonstrate, with hydraulic calculations, that the stormwater controls provided for the development will not adversely affect any existing or proposed buildings, Roads or structures by flooding. The hydraulic design of the drainage system shall be free-flowing. If the free-flow condition cannot be met, tailwater (surcharge) calculations shall be provided to demonstrate that the pipes will convey the runoff during all storm events. The calculations must contain a written summary explaining the rationale of the design so that a layperson can understand the basic design approach and its validity to the site in question. Furthermore, the calculations should be fully documented, including copies of charts or other reference sources to make review easier. These calculations shall be used to determine all drainage structures and pipe sizes.

(ii) The drainage calculations shall include design criteria, pre- and post-drainage areas, and other information sufficient for the Board or the Board's consulting engineer to verify the adequacy of any proposed drain, swale, drain field, culvert, bridge or catch basin. Said calculation shall be made separately for each drainage facility, showing its location, the total upstream drainage area, the underlying soil types, and the flow paths for the times of concentration, the design runoff, facility size, slope and capacity and the velocity of the water through it. Said calculations shall incorporate and document estimated impervious areas of building Lots as developed.

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(y) An Erosion and Sedimentation Control Plan following the "Guidelines for Soil and Water Conservation Urbanizing Areas of Massachusetts," USDA-SCS and "Erosion & Sediment Control and Site Development", USDA-SCS, latest edition and National Pollution Discharge Elimination System (NPDES) permit requirements, as applicable.

(z) Location and purpose of all existing and proposed easements with sufficient data, including lengths, bearings, and curve data, necessary to determine their exact location, together with the recording information for existing easements.

(aa) Soil types as determined by the Natural Resource Conservation Service (formerly the Soil Conservation Service).

(2) The following plans shall also be provided:

(a) A landscape plan, prepared by a registered landscape architect or, at the Board's discretion, a certified arborist or professional landscape designer, showing how the proposed Subdivision shall preserve components of the Town's appearance of rurality as set forth in A Study Plan for the Town of Carlisle dated April, 1995, and as it may subsequently be amended, and preserves or creates areas of open meadow, woodlands, water bodies, valuable habit for identifiable species of fauna and flora, any artifacts of historic value or scenic trails, and vistas or buffer areas. The landscape plan shall include the following:

(i) Existing vegetation to be retained and landscape treatments planned for the site.

(ii) A planting table of all new plantings, if any, with the botanical and common name of each species, its height/spread at planting and at maturity, and the quantity intended to be planted, along with the symbols used to represent the plants on the Plan.

(iii) A detail of the typical tree planting, and, if applicable, a tree well.

(iv) The limits of work beyond which no disturbance during construction will be permitted.

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(v) The perimeter of any existing dense wooded areas on the site; existing wooded areas intended for preservation; and the location, size and proposed fate of any existing trees larger than eight (8) inches in diameter measured at four (4) feet above ground that are within the proposed Roads, as well as such trees within (A) twenty-five (25) feet of the sideline of the proposed Roads, or (B) ten (10) feet beyond the edge of any cut or fill for the Roads, whichever is a greater distance.

(vi) Planting plans showing the location, size and species of street trees and shrubs to be planted within the Right-of-way of the proposed Roads and in the center of any Cul-de-Sacs.

(vii) Planting plan showing location, size, species, and wetland status of plants to be planted in detention basins, created wetlands, vegetated swales and other vegetated stormwater management facilities.

(b) A locus plan at a scale of one (1) inch equals two hundred (200) feet (1"=200') showing the proposed layout of the Lots and boundaries of the Subdivision with ownership of abutting properties indicated.

(c) A locus plan showing an area a minimum of one (1) mile diameter and a scale of one (1) inch equals eight hundred (800) feet (1"=800') showing the proposed Streets in relation to the existing private and public Ways, Roads and Streets, buildings, brooks, streams, rivers and other landmarks shown with sufficient clarity to show the relationship of the Subdivision to the community, its facilities and major features.

(d) A Street and Right-of-way layout plan prepared by a registered professional engineer, which shall clearly label and name every item and feature shown thereon, shall be drawn on separate sheets, shall be based on USC&GS bench mark elevations, and shall contain the following information:

(i) Separate layout plan for each proposed Road and Roadway, at a horizontal scale of one (1) inch equals forty (40) feet (1"=40'), showing:

(1) Locations and measurements of all exterior lines, centerlines, points of tangency, length of tangents, length of

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curves, intersection angles, radii of curves, sidewalks and planting strips, and permanent monuments and bench marks. Bench marks shall be shown every five hundred (500) feet along proposed Rights-of-way, and installed prior to fine grading of the gravel course.

(2) Locations and measurements of all Lot lines, buildings, Footpaths, driveways, trees, shrubbery and other vegetation that may impact sightlines and visibility at corners and intersections, public and private Rights-of-way and Roadways, and other features within forty (40) feet of the Right-of-way.

(3) Locations and measurements of all drain lines within Rights-of-way, together with their appurtenances.

(4) Locations and measurements of center and side lines of all Roadways, Rights-of-way, and curb lines for two hundred (200) feet either side of each existing intersecting Street, with elevations every twenty-five (25) feet.

(ii) Directly above or below the layout plan of each proposed Roadway, a profile plan of the proposed Street at a horizontal scale of one (1) inch equals forty (40) feet (1" = 40') and a vertical scale of one (1) inch equals four (4) feet (1" = 4'), showing:

(1) Existing center lines in fine black solid line.

(2) Existing right side lines in fine dashed line.

(3) Existing left side lines in fine black dotted line.

(4) Proposed center lines in heavy black line.

(5) Proposed grade elevations at the beginning and end of Rights-of-way and at fifty (50)-foot stations, except on vertical curves where they shall be shown at twenty-five (25)-foot stations and at the point of vertical curvature (PVC) and at the point of vertical tangency (PVT), for all center and side lines.

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(6) Rates of gradient for all center and side lines, and for all drain lines.

(7) Vertical locations and measurements of all drain lines, their appurtenances, and other utilities, as well as required new waterways. Sizes of all pipes shall be shown, as well as inverts of all pipes at each manhole and catch basin, together with rim elevations of all manholes and catch basins.

(8) Calculated high and low points of vertical curves.

(9) Vertical curve lengths and angle of deflection of intersecting tangents expressed in percent and the calculated K value.

(10) For center lines only, elevations of intersections of tangents, fifty (50)-foot stations, rates of slope of vertical curves, and data pertaining thereto in figures calculated for each twenty five (25)-foot station.

(iii) Profiles of all easements at a horizontal scale of one (1) inch equals forty (40) feet (1" = 40') and vertical scale of one (1) inch equals four (4) feet (1" = 4'), or such other scale as may be approved by the Board prior to submittal of the application.

(iv) Cross section(s) of each Right-of-way and Roadway, properly located and identified by station number, at such intervals along the Right-of-way as will adequately indicate any variations in its cross section. The cross sections shall show sidewalks, utilities, depth of utilities, depth of gravel, crown of the Street, thickness and composition of surface materials, and slope from the side of the Street to the property line.

(v) Wherever the pavement is not centered within the Right-of-way, the geometry of both the centerline of the pavement and the centerline of the Right-of-way must be shown.

(3) The Applicant shall provide the Board any additional information required by the Board if it finds that such information is necessary to properly act upon the Application.

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C. Notice to Town Clerk.

Every person submitting a Definitive Plan to the Board for its approval shall, pursuant to the Subdivision Control Law, file written notice that he or she has submitted such a Plan with the Town Clerk, by hand delivery or by registered mail, postage prepaid. If the notice is given by hand delivery, the Clerk shall, if requested, give a written receipt to the person who delivered such notice. The date of filing with the Board shall be certified on such notice by the Board or its authorized representative.

D. Review by Board of Health

Pursuant to M.G.L., Chapter 41, Section 81U, at the time of filing of the Definitive Plan, the Applicant shall also file with the Board of Health copies of the Definitive Plan. The Board of Health shall within forty-five (45) days after filing of the plan submitted pursuant to M.G.L., Chapter 41, Section 81O report to the Planning Board in writing, the approval or disapproval of the plan. Failure of the Board of Health to report shall be deemed approval by the Board of Health. (Board of Health approval of the plan is not equivalent to a building permit approval for a site within the limits of the plan.) If the Board of Health disapproves said plan, it shall make specific findings as to which, if any, of the areas shown on such plan cannot be used for building sites without injury to the public health, and include such specific findings and the reasons therefore in such report, and, where possible, shall make recommendations for the adjustment thereof.

E. Other Town Officials

Before approval of the Definitive Plan is given, the Board may obtain appropriate checks on the engineering and survey information shown on said plan and written statements that the proposed improvements shown are laid out to the satisfaction of the official, and for the facilities, below:

(1) The planning consultant(s) or engineer(s) designated by the Board as to the design of the street system, location of the easements and design of the sewerage, water and stormwater management systems, including appurtenances.

(2) The Tree Warden as to location, size and species of the street trees.

(3) The Fire Chief for location of fire-fighting appurtenances and other emergency appurtenances and access issues relating to fire fighting and other emergency services.

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(4) The Police Chief as to the street systems as they relate to security and circulation and safety of vehicular and pedestrian traffic.

(5) The Superintendent of the Public Works Department as to issues related to the maintenance of Roadways, drainage and utilities.

(6) The Pedestrian and Bike Safety Advisory Committee as to issues relating to Footpaths.

(7) Any other appropriate Town officials or committees.

The Board may require the Applicant to obtain the written statements of the appropriate official(s) for subsections (E)(2)-(6) above.

F. Field Inspection

After receipt of a complete Application, the Board may schedule a field inspection of the site of the proposed Subdivision, accompanied by the Applicant or his or her representative. In order to facilitate the field inspection and review of the site of the proposed Subdivision, temporary staking shall be required along the centerline of all proposed Roads in the Subdivision in locations sufficient to enable the identification of the Lots and Parcels within the Subdivision in time for the field trip. The Board's strong preference is that the Applicant refrain from undertaking any material clearing of the site prior to the Board's field trip to enable the Board and the Applicant to fashion a Subdivision plan that will most likely further the goals set forth in Article III, Section 1(B) of these Rules and Regulations (see also Article II, Section 9(A)(2).

G. Submission of Additional Information

All additional information submitted after the initial Application shall be submitted to the Board at or before the public hearing. At least eight (8) copies of any additional materials submitted shall be given by the Applicant to the Board.

H. Public Hearing

Before approval, modification and approval or disapproval of the Definitive Plan is given, a public hearing shall be held by the Board. Notice of such hearing shall be given by the Applicant at the Applicant's expense by publication in a newspaper of general circulation in the Town of Carlisle once in each of two (2) successive weeks, the first such publication to be not less than fourteen (14) days prior thereto. A copy of said notice shall be mailed by the Applicant to all Parties in Interest. The Applicant shall provide

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the Board's representative an opportunity to review the proposed publication and approve the proposed newspaper of general circulation. Applicant shall provide to the Board's representative, at least one (1) business day before the date of the scheduled public hearing, the certified mail return receipts as evidence of said Notice, a copy of the notice date stamped by the Town Clerk, and one set of newspaper tear sheets containing the published Notice.

I. Approval, Modification or Disapproval

Where a Preliminary Plan has been acted upon by the Planning Board or where at least forty-five (45) days have elapsed since submission of the Preliminary Plan, after the public hearing but within ninety (90) days of submission of the Definitive Plan, or such further time as may be agreed upon at the written request of the Applicant (notice of which extension of time having been filed with the Town Clerk), the Board shall take final action thereon. It may approve, modify and approve, or disapprove said plan, as provided by statute.

Where a Preliminary Plan has not been submitted or where forty-five (45) days have not elapsed since submission of the Preliminary Plan, after the public hearing but within one hundred and thirty-five (135) days of submission of the Definitive Plan, or such further time as may be agreed upon at the written request of the Applicant (notice of which extension of time having been filed with the Town Clerk), the Board shall take final action thereon. It may approve, modify and approve, or disapprove said plan, as provided by statute.

The action of the Board shall be by vote of a majority of all of the members of the Board.

(1) Certificate of Approval

Notice of the action of the Board shall be certified and filed with the Town Clerk and sent by registered mail to the Applicant. If the Board modifies or disapproves said plan, it shall state in its vote the reasons for its action. The conditions of approval of a Definitive Plan including any waivers of the Rules and Regulations granted by the Board and the conditions of any applicable special permits or variances shall be printed on a recordable sheet of the approved Definitive Plan and shall be reviewed and approved by the Board prior to endorsement. The sheet containing said conditions and waivers shall be subsequently recorded as part of the Definitive Plan. Final approval, if granted, shall be endorsed on the original drawing of the Definitive Plan by the signatures of a majority of the Planning Board (or by the signature of any person officially authorized by the Board) but not until the statutory twenty (20) -day appeal period has elapsed

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following the filing of the certificate of the action of the Board with the Town Clerk and said Clerk has Certified that no appeal has been filed. After the Definitive Plan has been approved and endorsed, the Applicant shall furnish the Board with four (4) prints thereof, to be distributed by the Board to the Board's consulting engineer, the Conservation Commission, the Board of Assessors, and the Board file.

(2) Final approval of the Definitive Plan does not constitute the laying out or acceptance by the Town of Streets within a Subdivision, nor entitle the Streets to such acceptance.

J. Modification, Amendment, Rescission

The Board, on its own motion or on the petition of any person interested, shall have the power to modify, amend or rescind its approval of a plan of a Subdivision or to require a change in a plan as a condition of its retaining the status of an approved plan. All of the provisions of the Subdivision Control Law relating to the submission and approval of a Subdivision plan shall, so far as apt, be applicable to the approval of the modification, amendment or rescission of such approval and to a plan which has been changed.

Notwithstanding the foregoing, no modification, amendment or rescission of the approval of a plan of a Subdivision or changes in such plan shall affect the Lots in such Subdivision which have been sold or mortgaged in good faith and for a valuable consideration subsequent to the approval of the plan, or any rights appurtenant thereto, without the consent of the owner of such Lots, and the holder of the mortgage or mortgages, if any, thereon; provided, however, that nothing herein shall be deemed to prohibit such modification, amendment or rescission when there has been a sale to a single grantee of either the entire parcel of land shown on the Subdivision plan or of all the Lots not previously released by the Board.

SECTION 7. *Performance Guarantee*

A. Condition of Endorsement

Before endorsement by the Planning Board of an approved Definitive Plan, the Applicant shall agree to complete said Definitive Plan in accordance with these Rules and Regulations, such completion to be secured by one, or in part by one and in part by another, of the following methods which may from time to time be elected by the Applicant:

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(1) Final approval with bonds or surety

(a) The Applicant shall either file a surety company performance bond, a deposit of money or negotiable securities in an amount determined by the Board to be sufficient to cover the cost of all or any part of the improvements required hereunder. Negotiable securities shall be from an institution which, in the opinion of the Board, is in sound financial condition. Such bond or security, if filed or deposited, shall be subject to approval as to form and matter of execution by Town Counsel and as to sureties and negotiable securities, by the Board, and shall be contingent on the completion of such improvements as set forth herein.

(b) If the Applicant elects to file a performance bond rather than to secure the performance of the completion of the Definitive Plan as hereinafter provided in Article II, Section 7(A)(3), the Applicant shall provide estimates prepared by a registered professional engineer of the cost of performing the various items of required work to be done, such estimates to be confirmed by the Board and its consulting engineer. The amount of any such security shall bear a direct and reasonable relationship to the expected costs necessary to complete the subject work, plus a twenty (20) percent contingency of the expected costs to guard against unexpected costs and effects of inflation. The estimate shall reflect the cost for the Town to complete the work as a public works project that may necessitate engineering, inspection, legal and administrative fees, additional staff time and public bidding procedures. The amount of the security shall be annually updated by the Applicant to cover current prices.

(2) Final approval with lender's contract

Following the recording of a first mortgage covering the premises shown on the Plan or a portion thereof given as security for advances to be made to the Applicant by the lender, the Board may, at its option, release Lots from the operation of the covenant given pursuant to clause (3) below, without receipt of a bond or deposit of money upon delivery to the Planning Board of an agreement with the Planning Board, which agreement shall be executed by the Applicant and the lender and shall provide for the retention by the lender of sufficient funds otherwise due the Applicant to secure the construction of Streets and Ways and the installation of services and other improvements and amenities in conformity with the regulations of the Board. The agreement shall also provide for a schedule of

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disbursements which may be made to the Applicant upon completion of various stages of the work, and shall further provide that in the event the work is not completed within the time set forth in the application, any funds remaining undisbursed shall be available for completion. Unless the lender executing such agreement is considered by the Town Treasurer to be in sound financial condition, the Board may reject such agreement as insufficient to serve as a performance guarantee.

(3) Final approval with covenant

The Applicant shall file a covenant in form and substance satisfactory to the Board, running with the land, executed and duly recorded by the owner of record, whereby such Ways, services and other improvements and amenities as required hereunder, not covered by bond, deposit or contract under clauses (1) or (2) hereof, shall be provided to serve any Lot before such Lot may be built upon or conveyed other than by mortgage deed.

B. Request for Release of Performance Guarantee/As-Built Plan

(1) Before the Board will release the interests of the Town in a performance bond or deposit (or, in the case of approval, issue a release of covenant), the Applicant shall send a statement of completion and request for release by registered mail to the Board and the Town Clerk in accordance with M.G.L., Chapter 41, Section 81U. Such statement shall be accompanied by the following:

(a) Certified copy of the layout plan of each Street in the Subdivision (as built or, in the case of approval of a covenant, of the Street or Streets serving the Lots for which a release is desired). Certification shall be by a registered professional engineer or registered land surveyor and shall indicate that Streets, including all Lot bounds, storm drains, sewers, water mains and other utilities and their appurtenances, have been constructed in accordance with the approved Plan and the Board's requirements and are accurately located as shown thereon and that said utilities are in good working order. The registered professional engineer or registered land surveyor shall also certify that the grades of all the Lots have been established as shown on the grading plan and that said grades have been established so as not to create adverse drainage patterns on to adjoining Lots or Streets.

(b) An "as-built" plan, together with notations of all deviations from the originally-approved and/or the Record Plan (as defined in Article II,

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Section 9(A)(1) below) in the form of revised sheets of said plan and supplemental sheets as required, and a digital copy thereof in a format acceptable to the Board, as well as a GIS-shapefile, as applicable, transmitted and/or provided on a digital storage media acceptable to the Board. The as-built plan shall also include the location of all improvements within the Subdivision, all drainage facilities, underground utilities and a Street acceptance plan or plans, as the case may be, at a scale of one (1) inch equals forty (40) feet (1" = 40'), suitable for recording and in a form acceptable to the Board and showing such data and boundaries as is necessary for the Town to properly lay out and accept the Street or Streets shown thereon.. The as-built plan shall also show all improvements that have been built or located (whether by the Applicant or otherwise) within the Rights-of-way or easements shown on the Record Plan.

(c) Written evidence satisfactory to the Board that the trees and other plantings required by these Rules and Regulations have been completed satisfactorily and that such plantings have been exposed to one (1) winter season (November 15-April 30) and that damaged plantings, if any, have been replaced. The Board shall coordinate confirmation of this matter with the Tree Warden.

(d) Written evidence satisfactory to the Board that the binding course on the Roadways was exposed to one (1) winter season (November 15-April 30) prior to the application of the finish course, and that the completed Street and drainage and other utilities and improvements have been exposed to the natural elements and weather conditions during one (1) additional winter season (November 15-April 30) without substantial change, or that damage, if incurred, has been repaired.

(e) The request for release shall be accompanied by evidence that the fee interest or easement in the Road has been transferred to the corporate entity created pursuant to Article II, Section 9(A)(3).

(2) Prior to final release of security, the Board may, at its discretion, grant a partial release from the required security for partial completion of improvements provided that the Board will release from any covenants only those Lots for which installation of Ways and services has been completed in accordance with the Rules and Regulations set forth herein, provided however, in evaluating any request for reduction of security, the Board shall take into consideration the cost to repair potential damage to Subdivision improvements from construction work on unbuilt Lots or on uncompleted Subdivision improvements elsewhere within

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the development. No reduction shall reduce the bond, deposit or covenant to a value below the estimated cost of completing the unfinished portions of the improvements or the potential cost to repair damage to Subdivision improvements from construction work on unbuilt Lots or on uncompleted Subdivision improvements elsewhere within the development. Estimates shall be prepared and confirmed as outlined in Article II, Section 7(A)(1)(b).

(3) Final Release of Security: If the Board determines that all the required improvements have been completed in accordance with the approved Definitive Plan and the Rules and Regulations set forth herein, it will release the interest of the Town in any bond or deposit and return the bond or deposit to the applicant, or release the covenant by appropriate instrument, duly acknowledged. However, even though all improvements covered by the performance guarantee may have been completed, the Board may delay the release of the performance guarantee if it determines that completion of construction on any remaining undeveloped or partially developed Lot or Lots creates a substantial risk of damage to the Subdivision improvements, and/or if other obligations of the Applicant in connection with the Subdivision approval have not been fulfilled.

(4) A Professional Civil Engineer retained by the Applicant shall certify that all construction was executed in conformance with the Subdivision Regulations and with all requirements agreed upon as a condition to plan approval and that the as-built Plan submitted accurately reflects that the conditions in the completed Subdivision are substantially in compliance with the approved Definitive Plan, with any deviations from the approved Definitive Plan noted, prior to release of any performance guarantee.

(5) Refusal of Request for Final Release: Pursuant to M.G.L., Chapter 41, Section 81U, if the Board determines that required construction or installation has not been completed in accordance with the approved Definitive Plan and the Rules and Regulations, it will specify the details wherein the construction or installation fails to comply with the approved Definitive Plan and/or the Rules and Regulations in a notice sent by registered mail to the applicant and delivered to the Town Clerk. If the Board fails to so notify the Town Clerk and the applicant within forty-five (45) days of receipt of a request for release of security, as described in Article II, Section 7(B)(1), the deposit or bond shall be returned and any covenant shall become void. In the event that the forty-five (45)-day period expires without such specification or without release of the security, the Town Clerk shall issue a certificate to such effect, duly acknowledged, which may be recorded.

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SECTION 8. *Conservation Restriction*

To ensure that the intent of a proposed perpetual Conservation Restriction pursuant to M.G.L., Chapter 184, Sections 31-33 is carried out during the period required to obtain necessary state approvals, an Applicant who proposes to perpetually restrict land for open space or trail use shall submit to the Planning Board an application that includes:

A. The proposed perpetual Conservation Restriction with signature lines for necessary governmental approvals pursuant to M.G.L., Chapter 184, Section 32; and

B. A form of recordable interim restriction in favor of the Town of Carlisle, acting by and through its Conservation Commission, which restriction complies with the provisions of M.G.L., Chapter 184, Section 26, which shall include:

(1) Statement that such restriction is in perpetuity; and

(2) The following language:

"In the event that a conservation restriction approved by the Conservation Commission and Selectmen of the Town of Carlisle and by the Secretary of the Environment, Commonwealth of Massachusetts, pursuant to M.G.L., Chapter 184, Section 32 is hereafter recorded, the terms of such conservation restriction approved pursuant to M.G.L., Chapter 184, Section 32 shall control over any inconsistent provisions herein. "

"The restrictions herein set forth may be released in whole or in part in accordance with the provisions of M.G.L., Chapter 184, Section 32. "

SECTION 9. *Endorsement and Recording of Approved Plan*

A. Endorsement

The approved Definitive Subdivision Plan is intended to be used as a contract document for the construction and inspection of Streets and utilities within the Subdivision in conformity with these Rules. The approved Plan shall also contain a "Record Plan" for purposes of filing with the Registry of Deeds or the Land Court.

(1) The following information and form is required for submission of the "Record Plan" for endorsement by the Board:

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(a) The entire approved Definitive Plan and all conditions of approval and any waivers, as amended by the Board in its decision of approval;

(b) Two (2) copies of the Plan drawn in compatible black drawing ink on polyester drafting film or other medium acceptable to the Registry of Deeds or Land Court, and two (2) contact prints thereof;

(c) Reference to any required documents such as the vote and the decision of the Board, restrictive covenants, easements deeded to the Town, conditions of the Board of Health or reference to Board of Health failure to report, any Notices of Intent or Orders of Conditions issued or required by the Carlisle Conservation Commission, etc. shall be inscribed on the "Record Plan" with a note that such document shall be recorded with the "Record Plan";

(d) The space for the endorsement of the Plan by a majority of the members of the Board as follows:

Approved [Date]

_____
_____
_____
_____
_____
_____

Being a majority of the Carlisle Planning Board
Endorsed: **[Date]**

(2) No construction or clearing and grubbing operations shall commence prior to endorsement by the Board and evidence of recording the Definitive Plan at the Registry of Deeds or Land Court is submitted to the Board as stated below. Any subsequent modification of the Definitive Plan shall be endorsed by the Board and recorded at the Registry of Deeds or Land Court within sixty (60) days of the date of the approval of such modification.

(3) Before endorsement by the Board of an approved Subdivision Plan, the Applicant shall provide the following documents acceptable to the Board:

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(a) A document which creates a single corporate entity which (i) will hold title to the fee interest in the Road and all easements relative thereto; (ii) shall be responsible for the maintenance of the Road and related structures, any Footpaths, storm drains, stormwater and water discharge easements, and plantings required by the Subdivision Plan; and (iii) shall include a demonstrable long-term ability to maintain the Road and related structures and easements; and

(b) a form of agreement binding the corporate entity to maintain the items listed in clause (ii) above in good condition and, as applicable, open to provide sufficient access for fire, police, ambulance/rescue and other vehicles at all seasons.

(4) Subdivision approvals are granted for a three (3)-year period. Failure to complete the construction of the Ways by the end of that period in accordance with the applicable rules and regulations of the Planning Board shall automatically rescind approval of the plan unless approval with or without modification of the plan has been extended by the Board in writing and notice of said extension is filed in the Town Clerk's office prior to the expiration of the initial three (3)-year period or any extended period.

B. Recording Plans

(1) Within one hundred and eighty (180) days after the expiration of the statutory twenty (20)-day appeal period and the return of an approved plan, the Applicant shall cause to be recorded in the Registry of Deeds, and, in the case of registered land, with the Recorder of the Land Court, a copy of the "Record Plan" and accompanying covenants or agreements, if any. Within ten (10) days of plan recording, the Applicant shall provide the Board one (1) polyester film reproducible, six (6) prints of the Definitive Plan, one (1) of which shall be certified by the Registry of Deeds as having been recorded, and one (1) copy of final covenants and restrictions, noting book, page number and date of recording for each. One (1) copy of the Definitive Plan shall be transmitted to the Building Inspector, the Conservation Commission, the Board of Health and the Carlisle Trails Committee.

(2) The approved "Record Plan," the decision of the Board, any restrictive covenants and other supplementary documentation as required by the Board shall be recorded by the Applicant or his qualified agent at the Registry of Deeds or the Land Court before commencement of any construction or pre-construction

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activity at the site, including, but not limited to, grading, tree removal or earth removal.

(3) Failure to comply with the procedural and other requirements of these Rules and Regulations, including, but not limited to, the recording requirements set forth in Article II, Section 9(B)(2) above, shall result in an automatic rescission of the approval given hereunder by the Board.

ARTICLE III
DESIGN STANDARDS

SECTION 1. *General*

A. Basic Requirements

Applicant shall observe all design standards for a Subdivision as hereinafter provided. Unless specifically provided otherwise herein, State Construction Standards shall be followed, and all matters left open or undefined in those Standards shall be specified by the Board on a case by case basis.

The design and layout of the proposed Subdivision shall be guided by the goals and objectives of any existing master plans or study plans, or statement of goals and objectives for the Town of Carlisle.

B. Natural Features.

All reasonable efforts shall be made to preserve natural features both within and outside the Road Right-of-way, such as, but not limited to, existing vegetation, water courses, open space, large trees, large boulders and rock outcroppings, wet areas, scenic views, historic locations, existing trails and similar community assets, which, if preserved, may add attractiveness and value to the Subdivision.

Design and construction of a Subdivision shall to the extent possible, minimize certain adverse effects of the proposed development and maximize certain desired effects as set forth in Attachment A, Sections B(1) and (2) attached hereto.

With respect to Attachment A, Sections B(1) and (2), the applicant shall have the burden to show to the Board that it has satisfied the goals set forth in B(1) and (2) and shall satisfactorily demonstrate to the Board that alternative designs of the proposed Subdivision would have a greater negative impact on the natural features of the land within the Subdivision than that which is proposed.

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C. Waste and Debris

The disposal within the Subdivision of wood wastes, tree stumps and wood debris generated by the clearing of land in connection with the Subdivision shall be prohibited.

D. Lots

(1) All Lots within the Subdivision shall comply with the area, frontage, width and other requirements of the Zoning Bylaws of the Town of Carlisle. Lots created around an existing structure shall not create a dimensional violation and/or shall not make a non-conforming structure more non-conforming.

(2) The Planning Board may limit the number of Lots which obtain access on a Subdivision Roadway where the Planning Board determines, in its discretion, that such a limitation is necessary to help to achieve the purposes of the Subdivision Control Law. Where the Planning Board makes such a determination, the maximum number of Lots shall be noted on the approved Definitive Subdivision Plan.

E. Parks

(1) Before approval of a plan the Board may also in proper cases require the plan to show open space(s) for a park or parks suitably located for playground or recreation purposes or for providing light and air. The open space shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of such land, but generally not less than five (5) percent of the land to be subdivided, depending on the location and quality of the land being set aside. The minimum area acceptable for set aside shall be three (3) acres. Land designated for open space purpose shall not include wetlands, ledge or other land unsuitable for recreation purposes. The Planning Board may by appropriate endorsement on the plan require that no building be erected upon such open space for a period of three (3) years without its approval.

(2) As an alternative for the set-aside for parks and open spaces, the Applicant may offer to provide other suitable benefits or amenities acceptable to the Board, such as retaining a maximum amount of the Lot in its natural condition, retaining other natural features within the Subdivision, or providing a no-build buffer area adjacent to the public Road(s).

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SECTION 2. *Streets/Roads/Footpaths*

A. General

(1) A Subdivision, or continuation of a Subdivision, shall not have fewer than two (2) noncontiguous accesses with existing Town Roads except in a Subdivision of ten (10) or fewer building Lots having legal frontage on a single Dead-end Street.

(2) Roads within a Subdivision shall be laid out such that the closure of any single Road will deny access to no more than ten (10) building Lots. Included in this count are any existing Lots with denied access, plus those of the Subdivision.

(3) No Road constructed on or after June 22, 1981 or shown on a Subdivision plan approved on or after said date having a paved Roadway width of less than twenty (20) feet may be used to provide access to a Subdivision having more than fifteen (15) building Lots.

(4) No proposed Subdivision Road shall provide access to land in another town unless the land in the adjacent town has suitable and adequate access to an existing Road in that town that meets Carlisle's standards for access, including, but not limited to, the length of Dead-end Roads, Roadway widths and grading requirements and said proposed Subdivision Road shall not be one of the two non-contiguous Roads required by Article III, Section 2(A)(1) above.

(5) The Board will not approve a Subdivision of land in Carlisle where access to the Subdivision located in Carlisle is through land in another town unless there is access to the Subdivision from a public Road in Carlisle, or unless the Planning Board otherwise finds that there is effective access from Carlisle to the Subdivision.

(6) No Subdivision plan will be approved unless its Street system assures physical access to each Lot without reliance on common driveways. The driveway for each Lot shall have the ability to access through the frontage of that Lot, and the location of the proposed driveway and the grading of such shall be shown on the Definitive Plan. The driveway shall be designed to minimize stormwater runoff from the Street onto the Lot or from the Lot onto the Street.

(7) All Streets in the Subdivision shall be designed so that, in the opinion of the Board, they will provide safe vehicular and pedestrian travel and natural drainage, with no drainage pockets, and so that they are adjusted to the topography and provide the minimum number of intersections with existing

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Streets. Due consideration shall also be given by the Applicant to the attractiveness of the Street and Footpath layout in order to obtain the maximum livability and amenity of the Subdivision. Footpaths shall be designed to be easily integrated with existing Footpaths along adjacent Roadways. The layout of such Footpaths shall be designed to fit as naturally as possible with the landscape along the Right-of-way. Offsetting the Roadway from the centerline of the Right-of-way in order to provide this aesthetic benefit is acceptable but must be specifically approved by the Board.

(8) Provision shall be made for proper projection of Streets and Ways, trails and Footpaths to ensure adequate future access to any adjoining property that is not yet subdivided. If suitable easements or other connections from existing Streets are already established providing potential access to the proposed Subdivision, the Streets and Ways shall be constructed to connect the proposed Subdivision Streets via said easements and connections.

(9) The proposed Streets and Footpaths shall compose a system that ensures safe and adequate circulation of vehicular and pedestrian traffic within the proposed Subdivision and coordination with adjacent Streets and Roads. In order to ensure vehicular and pedestrian safety, the Board will consider the adequacy of Streets adjacent to or providing access to a proposed Subdivision. When, in the opinion of the Board, a Subdivision is deemed to have a detrimental effect on safety and vehicular and pedestrian traffic flow or where a Subdivision borders on an existing but inadequately constructed Street, the Board may require appropriate and reasonable improvements in Streets and Ways bordering or providing access to the Subdivision, including the construction of Footpaths, to minimize congestion and to ensure safe and adequate vehicular and pedestrian travel.

(10) Article X, Section 10.3.8 from Carlisle's General Bylaws governs the width of Rights-of-way and pavements.

(11) Where a Future Street System plan for the Town shows a proposed Street on land within the Subdivision, the street system thereof shall provide a Street in the same general location as shown on the Future Street System plan.

(12) Where a Footpath Master Plan shows a proposed Footpath adjacent to the Subdivision, the Footpath system of the proposed Subdivision shall extend to the proposed Footpath.

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(13) Reserve strips prohibiting access to Streets, Footpaths, or adjoining property shall not be permitted, except where, in the opinion of the Board, such strips shall be in the public interest.

(14) Streets and Footpaths shall not be located in such a manner as to terminate within less than one hundred (100) feet of any boundary of the Town of Carlisle or to project or extend across such boundary unless specifically approved by the Board as being in the public interest, having regard to safety of travel, congestion of adjacent public Ways, and coordination with other Ways.

(15) Any fill material used shall be free of hazardous materials and free of construction debris or other materials that would not allow the fill to be properly compacted and stable.

(16) Any damage to newly constructed or existing pavements that in the opinion of the Board or its designated agent was caused by the contractor's operation shall be repaired by the contractor as directed by Board or its designated agent at the contractor's expense.

B. Alignment and Width

(1) Intersections along an existing and/or a proposed Local Street shall have minimum centerline offsets of not less than one hundred and twenty-five (125) feet. Intersections along an existing and/or proposed Collector Street shall have minimum centerline offsets of not less than four hundred (400) feet, and intersections along an existing and/or a proposed Major or Minor Arterial Street shall have minimum centerline offsets of not less than six hundred (600) feet. Streets intersecting on opposite sides of the same Street shall be laid out either directly opposite one another or shall meet the minimum centerline offsets set forth above.

(2) Streets shall be laid out so as to intersect as nearly as possible at right angles. No Street shall intersect any other Street at less than sixty (60) degrees.

(3) The curb radius at Street intersections shall have a minimum radius of twenty-five (25) feet and a minimum property line radius of twenty-five (25) feet and be sufficient in the opinion of the Board to safely accommodate all normal traffic. Considerations shall include but not be limited to sight lines, terrain, Street width, Street grades, and anticipated traffic flow.

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(4) The minimum centerline radius shall be as shown on Exhibit E. Warning signs shall be provided where appropriate.

(5) The super elevation of curves, sight distances, tangents between curves, grades, transition areas, crest and sag vertical curves and stopping sight distances will be determined by using the table set forth on Exhibit E.

(6) At locations where Subdivision Roadways intersect existing town Roadways, sight distances shall comply with AASHTO standards for the 85-percentile speed measured along the existing Roadway. No intersection can occur at a point where grades along the existing Street are in excess of five (5) percent.

(7) The intersection of any new Roadway measured from its edge cannot be placed within fifty (50) feet of an existing driveway measured to the edge of the driveway.

(8) Driveway access zones shall be designated along the frontage of legal Lots to demonstrate that a driveway can be built that has a grade of ten (10) percent or less and that the twenty-five (25) feet adjacent to the Roadway be at a grade of two (2) percent or less.

(9) All appropriate traffic signage shall be provided as determined by the Board.

C. Grade

(1) The centerline grade for any Street shall be as set forth on Exhibit E.

(2) The maximum centerline grades shall be as set forth on Exhibit E and as set forth in Article III, Section 2(C)(3) below.

(3) Where the grade of any Street at the approach to an intersection exceeds two (2) percent, a leveling area shall be provided having not greater than two (2) percent grades for a distance of not less than fifty (50) feet, measured from the edge of pavement of the intersecting Street.

(4) If required by the Board, curbing shall be required for the full length of a Roadway if any part of the Roadway exceeds three (3) percent grade, except where alternate means of flow and erosion control, acceptable to the Board, is provided.

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D. Dead-end Streets

(1) No part of the Street Right-of-way shall be more than one thousand (1000) feet measured by the centerline from the point of closure referred to in the definition of a Dead-end Street in Article II, Section 1 of these Regulations and no Dead-end Street shall provide legal frontage for more than ten (10) building Lots.

(2) Dead-end Streets shall be provided at the closed end with a Cul-de-Sac turnaround having an outside Street line diameter of one hundred and sixty (160) feet, with an outside diameter of the paved surface of one hundred and forty (140) feet. A landscaped island having a diameter of one hundred (100) feet shall be provided in the center of the turn-around and the natural vegetation shall be retained where possible; in areas that cannot retain the natural vegetation, a landscaping plan shall be provided for the Cul-de-Sac island.

(3) A Cul-de-Sac of a Dead-end Street shall not have a slope in any direction of greater than two (2) percent.

(4) No more than three Lots can be accessed on the Cul-de-Sac.

(5) At the request of the Board, Dead-end Streets shall have sidewalks or bikeways designated on the plans. If a Subdivision includes extending a Dead-end Street that has previously had such a sidewalk or bike path designated, but not built, the proponent may be required to construct such sidewalk as part of its work.

(6) Where a temporary Dead-end Street extends more than three hundred (300) feet beyond an intersection, there shall be constructed as part of the Roadway, a temporary turn-around located directly adjacent to the Subdivision boundary and extending across the full width of the Street Right-of-way.

SECTION 3. *Easements*

A. An easement shall be given to the Town to provide access from the existing public Way or proposed Subdivision Road to the source of water and for maintenance of the water hole or dry hydrant system required by Article III, Section 4 below. Easements for storm drains or fire protection across Lots or centered on rear or side Lot lines shall be provided where necessary and shall be at least twenty (20) feet wide.

B. Where a Subdivision is traversed by a watercourse, drainage way, channel or stream, the Board may require that there be provided a stormwater easement of adequate

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width to conform substantially to the lines of such water course, drainage way, channel or stream, and to provide for construction or other necessary purposes.

In addition, the Board may require easements necessary for the proper discharge of water.

C. Easements for Footpaths and woods paths and trails will be required by the Board to provide for passage as part of an existing or proposed town Footpath and trail system. Such easements shall generally be at least twenty (20) feet wide,-or less in locations and at the specific width as required by the Board in consultation with the Carlisle Trails Committee.

D. Any easement under this section shall be assigned to the corporate entity as required by Article II, Section 9(A)(3) or to the Town, as determined by the Board.

E. All easements, except an easement specifically serving the individual dwelling, shall not intersect within the ellipse required by Section 4.1.3.3 of the Carlisle Zoning Bylaws.

F. The boundaries of all easements shown on the Subdivision Plan shall be satisfactorily marked on the ground to enable owners of the Lots and the Board and its consulting engineer to be able to identify the location of such easements.

SECTION 4. ***Fire Protection***

A. All Lots and dwellings within the Subdivision shall have adequate provisions for fire protection, including access to an adequate source of water, as determined by the Planning Board in consultation with the Fire Chief. All fire protection systems required by the Board shall be installed and functional and accepted by the Fire Chief prior to the issuance of any building permits for Lots within the Subdivision.

B. If required by the Board, a five (5) foot high chain link fence or other protective enclosure as required by the Board, with locking gate shall be provided to enclose each water hole or fire pond.

SECTION 5. ***Improvements***

A. Street Grading

(1) The entire area of each Road Right-of-way shall be cleared of all stumps, brush, roots, boulders, trees, and like material not intended for preservation

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pursuant to Article III, Section 1(B). Notwithstanding Article III, Section 1(B), all vegetation, stumps, brush, boulders, and the like shall be cleared to the limit of the construction of the Road and side slopes.

(a) Notwithstanding the second sentence of Article III, Section 5(A)(1) above, the Board may require the Applicant to clear the Right-of-way of natural materials as little as possible in order to preserve the natural features of the Parcel and require that clearing only occur as necessary to provide adequate sight lines for traffic at curves and intersections and to provide for side slopes where applicable.

(2) Within each Street, the full length and width of the Roadway and shoulders shall be excavated or filled, as necessary, to a subgrade parallel to the finished grade herein required. If the soil is soft or yielding, or contains rocks or boulders, clay, sand pockets, peat, loam, organic material or other material detrimental to the subgrade, such material shall be removed and replaced with ordinary fill. Ordinary fill shall consist of naturally occurring soil free of logs, stumps, roots, boulders, debris, and appreciable amounts of compressible or organic soils. Ordinary fill shall have the physical characteristics of soils designated A-1, A-2-4, or A-3 under AASHTO M145. Stones over six (6) inches in greatest dimension shall be excluded. Ordinary fill shall be spread and compacted in layers not exceeding twelve (12) inches. Each layer shall be compacted to ninety-five (95) percent of maximum dry density as determined by AASHTO Test Designation T99, Method D.

(3) The boundaries of the Right-of-way shall be satisfactorily marked on the ground after the Right-of-way has been cleared and prepared as stated above to enable owners of the Lots and the Board and its consulting engineer to be able to identify the boundary line between the Lot and the Right-of-way.

B. Roadways

(1) Roadways shall be constructed for the full length of all Streets within the Subdivision shown on the Plan, except for any portion of a Street that is not needed to provide access or frontage to a Subdivision Lot. In such cases, however, only the requirements for Roadway construction (including related shoulders and side slopes) shall be waived; the requirements hereof for Street Grading (Article III, Section 5(A)), Storm Drainage (Article III, Section 5(G)), and Monuments (Article III, Section 5(I)) shall still be in effect. The centerline of all constructed Roadways shall coincide with the centerline of the Street Rights-of-way, except as allowed under Article III, Section 2.

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(2) The minimum width of paved Roadways shall meet the requirements of Section 10.3.8.3 of the General Bylaws of the Town of Carlisle.

(3) Roadways shall be provided with a foundation consisting of twelve (12) inches of compacted gravel, laid to a centerline grade four (4) inches below the proposed finished grade and having a transverse grade conforming with the requirements of the Typical Roadway Cross Section (Exhibit G). The minimum width of the gravel base of the Roadway shall be twenty-eight (28) feet, extending fourteen (14) feet or more on either side of the centerline of the paved Roadway. Gravel shall consist of hard durable stone and coarse sand free from loam and clay, uniformly graded and containing no large stones. Gradation requirements shall be determined by AASHTO T27 and shall conform to the following:

SIEVE	PERCENT PASSING
4"	100
1"	60-100
1/2"	50-85
No. 4	40-75
No. 40	10-35
No. 200	10

The gravel shall be spread and compacted in layers not to exceed six (6) inches in depth. Each layer shall be compacted to ninety-five (95) percent of maximum dry density as determined by AASHTO Test Designation T99, Method D, at optimum moisture content. Any area of gravel base which, after being rolled, does not form a satisfactory, solid, stable foundation shall be removed, replaced, and recompacted. In place density tests shall be made in accordance with AASHTO Test Designation T191. The Board may require additional gravel in those areas where, in its opinion, the ground conditions make it necessary.

(4) Roadways shall be paved with two (2) courses of bituminous concrete laid on a previously approved compacted gravel base. The surface course and binder course shall be laid two (2) inches thick each as measured after compaction. These thicknesses are minimum thicknesses, not average thicknesses.

Bituminous concrete surface course and binder course shall both conform in all respects to Commonwealth of Massachusetts, Massachusetts Highway Department, Standard Specifications for Highways, Bridges and Waterways for Class I, type I-1. Installation and construction of bituminous concrete pavement shall conform in all respects to the requirements of Commonwealth of

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Massachusetts, Massachusetts Highway Department, Standard Specifications for Highways, Bridges and Waterways, for Class I Bituminous Concrete Pavement Type I-1, Section 460.

(5) Curbing, if used, shall be sloped granite (Massachusetts Highway Department Type SB Granite Edgestone); however, vertical granite (Massachusetts Highway Department Type VA4 Granite Curb) shall be used at Street intersections where the radius is fifty (50) feet or less. Transition stone shall be used between sloped granite curbing and vertical granite curbing. Curbing shall not be used around the interior of the island of a Cul-de-Sac.

(6) The binder course shall be exposed to one (1) winter season (November 15-April 30) prior to the application of the finish course. No paving may take place before April 15 or after November 15 in any year. In order to minimize damage to the finish course, the finish course shall not be applied to any of the Ways in the Subdivision until construction on each and every Lot in the Subdivision is, in the opinion of the Board, completed or substantially completed. Notwithstanding the above, the Board may determine that the finish course may be applied to certain Ways in the Subdivision if the Board finds that construction is completed or substantially completed on each and every Lot in the area of the Subdivision accessible from such Way(s) and said certain Ways are not otherwise accessible from other Ways within the Subdivision on which such construction on Lots is not complete.

C. Footpaths

(1) Footpaths shall be required by the Board to improve circulation and connections within existing, proposed and potential future Subdivisions, Streets and Ways unless the Board determines that safe pedestrian travel is otherwise provided. The Footpath shall be on at least one side of the Street, and the design and construction shall be based upon the nature of the Subdivision and the natural environment with the goal of maintaining a natural appearance and blending into the natural land features and terrain. In addition, the Board may require the installation of pedestrian ways, trails, bridle paths, bicycle paths and/or Footpaths where deemed necessary to provide adequate circulation or access to schools, playgrounds, parks, shops, transportation, open spaces, recreation and conservation areas, other community facilities, and to and between existing, proposed and future developments and neighborhoods. Generally, the Footpath will be five (5) feet wide, shall follow the existing terrain and any existing or proposed stone walls, and shall meander around large trees and rock outcropping, with the objective of minimizing any adverse impact on the natural environment.

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The Applicant shall consult with the Carlisle Pedestrian and Bike Safety Advisory Committee as early as possible in the application process to discuss the location and type of Footpath for and in connection with the Subdivision.

(2) The Board may, in appropriate circumstances, request that Footpaths be constructed along existing Roadways.

(3) Footpath construction shall begin upon a firm and stable subgrade free of loam, roots or other organic materials. A gravel base having a minimum thickness after thorough compaction of six (6) inches shall be required. Gravel shall be free of all stone over three (3) inches in greatest dimension, free from loam, clay, excessive fines or other foreign matter, and shall be of such a gradation to allow adequate compaction. At the Board's discretion, the Footpath's surface shall consist of (a) Class 1, Type 1 bituminous concrete with a wearing surface of two and one-half (2.5) inches applied in two courses, (b) bituminous concrete similarly applied with an additional course of gravel not greater than one-half (0.5) inch at its greatest dimension, or (c) an aggregate surface with organic stabilizer.

(4) The area between the Footpath and the Road pavement is to be finished as directed by the Board, which will consider the desirability of maintaining the natural barriers such as trees, rocks, and fences in said area.

(5) Handicap ramps shall be installed at all crosswalks and driveways in accordance with the requirements of the Massachusetts Architectural Access Board and in accordance with the Americans with Disabilities Act ("ADA") and all Footpaths shall comply with the ADA.

(6) If the Board concludes that a Footpath is not currently required within the Subdivision, the Board may, nevertheless, require the Applicant to grant the Town easements within the Subdivision that will enable possible future construction and use of a Footpath.

(7) At the Board's option the maintenance of the Footpaths within the Subdivision shall be the responsibility of a single corporate entity controlled by the owners of the Lots within the Subdivision pursuant to an agreement acceptable to the Board.

(8) If approved by the Board, the Applicant may, in lieu of the installation of all or some of the Footpaths in the Subdivision, contribute funds to the Town to mitigate the adverse impact of the Subdivision on pedestrian safety and vehicular traffic at a rate of $15 per linear foot based on the length of the Footpath that

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otherwise would have been required by the Board. The contributed monies shall be deposited in the Carlisle "Pathways-Gift Account" for the use of constructing and maintaining Footpaths and trails in Carlisle.

D. Shoulders

(1) Notwithstanding the provisions of Article III, Section 5(D)(2), stabilized shoulders having a width of at least four (4) feet on Dead-end Streets, six (6) feet on Collector and Local Streets and eight (8) feet on Major and Minor Arterial Roads shall be constructed on each side of the Roadway.

(2) Such shoulders shall consist of at least six (6) inches of good quality loam brought to a finished grade, rolled and seeded, and laid on at least nine (9) inches of well-compacted base material except where erosion control requires use of alternative material.

(3) No utility poles or trees shall be retained or placed within the required shoulders so as to be closer to the edge of the paved Roadway than two (2) feet on Dead-end Streets, four (4) feet on Collector and Local Roads, and six (6) feet on Major and Minor Arterial Roads.

E. Side Slopes

(1) The area outside the shoulders may be sloped. Said slope shall start not less than the required shoulder width from the edge of the Roadway, shall extend until it meets the finished grade of abutting Lots and shall not exceed one (1) foot vertical for every three (3) feet horizontal.

(2) Loam shall be applied to a depth of not less than four (4) inches, rolled and seeded. Loam shall cover all graded shoulders and backs of shoulders up to and blended into natural ground cover.

F. Trees and Other Vegetation

(1) Trees, not less than twelve (12) feet in height and at least two (2) inches in diameter measured at four feet above ground and of a species approved by the Board shall be planted on every Street and within any Cul-de-Sac in the Subdivision wherever, in the opinion of the Board, existing woodlands or suitable individual trees are not retained. Placement of trees shall be at intervals not greater than forty (40) feet, in one-half (0.5) cubic yard of topsoil. The Applicant shall

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be responsible for any trees that do not remain upright and in good health until the Street has been accepted by the Town.

(2) All cut and fill slope within or contiguous to the Street Right-of-way shall be planted with suitable, well-rooted, low growing plant materials as determined by the Board. Wood chips, mulch, seeding or siding shall be used to eliminate erosion during construction and until permanent vegetation is established.

(3) Whenever possible, the Applicant shall maintain existing trees and plantings rather than removing such and replacing with new plantings. All plantings shall be native, non-invasive plant species and acceptable to the Board.

(4) A Maintenance Plan shall be prepared as part of the design of the landscaping plan. The plan shall include the types of maintenance normally required for the trees, landscaping and planting approved as part of the Subdivision. The plan shall be submitted to the Board for approval, and shall be included on the Definitive Plan.

(i) At the Board's option, the maintenance of the trees, plantings and landscaping shall be the responsibility of a single corporate entity controlled by the owners of the Lots within the Subdivision pursuant to an agreement acceptable to the Board.

G. Storm Drainage

(1) Storm drains, culverts and related installations, including catch basins, vegetated swales, gutters and manholes, and water quality inlets where necessary in the opinion of the Board, shall be installed within the Subdivision to permit unimpeded flow of all natural water courses; to insure adequate drainage of all low points along Streets; to control erosion and to intercept stormwater runoff near the corners of the Roadway at intersecting Streets and along Streets at intervals reasonably related to the extent and grade of the area drained; and to capture and infiltrate the first inch of runoff from the impervious areas of the Subdivision and adequately dispose of all surface water intercepted or otherwise collected per the Mass DEP Massachusetts Stormwater Handbook (latest edition). Provision shall be made for adequate disposal of all surface water intercepted or otherwise collected.

(2) Use of natural areas to control, mitigate, and/or alter rates of runoff is preferred. When such areas are utilized, their existing vegetation shall be left undisturbed to the maximum extent that is practicable, as approved by the Board.

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However, if such natural drainage areas are insufficient or non-existent, other methods of controlling runoff including, but not limited to, detention basins, infiltration trenches and basins, vegetated swales, created wetlands, and retention basins. Newly constructed drainage areas shall be planted with native trees, shrubs, and other vegetation necessary to stabilize any slopes and to facilitate percolation of stormwater and appropriate for pollutant removal. The landscape plan for the Subdivision should show proposed vegetation and existing vegetation to be saved. Newly constructed drainage areas shall be designed to be as maintenance-free and aesthetically pleasing as is practicable.

(3) No stormwater shall be discharged directly to a resource area as defined in the Wetlands Protection Act and its regulations 310 CMR 10.00, without meeting the performance standards set forth in 310 CMR 10.00 and the Department of Environmental Protection's "Stormwater Management Volume One: Stormwater Policy Handbook and Volume Two: Stormwater Technical Handbook" as the same may be amended.

(a) If applicable, the material used for the dike construction shall be specified and a cross section detail provided. The dike shall provide for suitable access for equipment necessary for maintenance of the basin. Side slopes of the basin shall be no steeper than 3:1. At least one (1) foot of free board shall be provided in the 100-year design storm.

(b) Where stormwater drains into the basin, vegetated swales, sediment forebay, water quality inlets or other such best management practices ("BMP") shall be provided to localize sedimentation. Dead storage space below the outlet from the detention basin shall be designed for the build-up of sedimentation. This information shall be shown on the plans.

(c) The outlet structure shall be as maintenance-free as possible and designed to prevent debris from plugging the outlet structures. Details of the outlet structure shall be shown on the plans.

(d) An emergency spillway shall be provided to allow release of runoff for the storm frequency greater than the 100-year storm or outlet structure failure and shall be designed to minimize damage during such an event. Spillways shall be constructed of properly sized riprap carefully placed and hand chinked. Spillway details shall be shown on the plans.

(e) Drainage easements shall be provided to include all of the detention basins or other BMP facilities and their appurtenant structures. At a

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minimum the easement shall extend twenty (20) feet from the toe of the exterior basin slope, and there shall be a minimum twenty (20)-foot wide access easement from the nearest public Way. The easements pertinent to the detention basin or other BMP facilities together with the basin shall be held by the legal entity formed pursuant to Article II, Section 9(A)(3).

(f) The proposed stormwater management system and BMP facilities shall be located entirely on private property and to the maximum extent possible on one (1) Lot.

(g) The construction of the stormwater management system and/or other BMP facilities shall precede all other construction, excepting that clearing which is necessary for access to the basin site and the installation of erosion control measures.

(h) An enforceable covenant, running with the land, to the benefit of the Town, shall be imposed on every Lot within the Subdivision, as designated by the Board, which covenant shall obligate each Lot owner for a pro-rated share of the stormwater management facilities and any appurtenance thereto. Said covenant shall include a provision for its extension pursuant to M.G.L., Chapter 184 Section 27 as may be amended from time to time. The operation and maintenance requirements of the stormwater management facilities as described in Article III, Section 5(G)(3)(g) shall be incorporated into this covenant. The covenant shall be reviewed by Town Counsel and shall be subject to approval by the Board. The covenant shall provide the Town the perpetual right and/or authority to enter upon easements pertinent to the stormwater management facilities for purposes of emergency repairs or maintenance, but this shall not be construed to impose any legal obligation upon the Town to render such services.

(i) Infiltration of runoff from impervious surfaces (other than roof runoff) shall only be allowed where pretreatment of runoff for sediment removal of eighty percent tss (total suspended solids) is provided.

(j) Infiltration design shall be based on Darcy's Law (Q=Kia) where the permeability coefficient of the soil is determined through in-situ permeability testing outlined in the Mass DEP Massachusetts Stormwater Handbook (latest edition), located in Volume 3, Chapter 1, page 11 (2008 edition), for saturated hydraulic conductivity. Infiltration design may also use the Rawls Table (1982) for saturated hydraulic conductivity located in

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Volume 3, Chapter 1, page 22 (2008 edition). The bottom of the infiltration system shall be a minimum of two (2) feet above seasonal high groundwater. Seasonal high groundwater shall be determined per Title V. The Applicant should consult with the Board and its consulting engineer to determine with specificity the methodology to be employed in connection with the infiltration testing which will be used as a basis in designing the infiltration system.

(k) Swales shall be designed using the methodology contained in "Hydraulic Engineering Circular 15" (HEC 15) as published by the Federal Highway Administration. Soil/vegetation shear stresses shall be calculated for temporary (during construction) and permanent conditions and submitted to the Planning Board as part of the drainage calculations for review.

(4) Detention basins and all other BMP facilities shall comply with the design standards and performance requirements set forth in the Mass DEP "Stormwater Management Volume One: Stormwater Policy Handbook and Volume Two: Stormwater Technical Handbook", as the same may be amended.

(5) When a closed drainage system is proposed and, as applicable, to open drainage systems and to promote Low Impact Design (LID) systems, catch basins will be required at all low points and on both sides of the Roadway on continuous grade at intervals of not more than three hundred (300) feet. Drainage patterns at intersections shall be evaluated and catch basins designed and constructed so as to prevent any flooding at the intersection. Any catch basins used shall be at least six (6) feet deep and four (4) feet in diameter (inside measurements), with a forty-eight (48) inch or greater sump below pipe invert and shall be constructed of precast concrete units. Oil and grease traps shall be installed on all structures. Manhole covers and catch basin grates shall be in conformance with Massachusetts Department of Public Works Section 201, with catch basin grates designed and placed so as to cause no hazard to bicycles. Subdrains, constructed as shown in the Mass. Highway Department Construction Standards, shall be installed at the edge of the area to be paved when deemed necessary by the Board.

(6) All drainage pipes shall be at least twelve (12) inches inside diameter and made of reinforced concrete or HDPE (High Density Polyethylene) pipe with a smooth interior conforming with Massachusetts Department of Public Works specifications for Class III pipe or such higher class as may be required by the depth of cover. Where depth of the cover on the pipe is less than thirty-six (36) inches, Class V pipe shall be used, except that HDPE pipe may be used outside of

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the Right-of-way. The minimum cover of a pipe shall be eighteen (18) inches. The pipe shall be laid on a slope of not less than one-half (0.5) percent. The minimum pipe velocity for the design storm shall be two (2) feet per second and the maximum velocity shall be ten (10) feet per second. Manhole covers and grates shall be in conformance with Massachusetts Department of Public Works specifications 201, designed and placed so as to cause no hazard to bicycles. No catch basins shall serve as manholes. Trash racks shall be installed at both ends of all covers. A detail of the drainage pipes and all connections shall be provided on the Definitive Plan.

(7) Interceptor drains shall be designed and constructed and incorporated into the drainage system where warranted by groundwater elevations.

(8) Proper connections shall be made with any existing drains and adjacent Streets or easements that prove adequate to accommodate the drainage flow from the Subdivision. In the absence of such facilities or the inadequacy of the same, it shall be the responsibility of the Applicant to extend drains from the Subdivision as required to properly dispose of all drainage from said Subdivision in a manner determined to be proper by the Board and to secure for the Town any necessary drainage rights.

Where adjacent property is not subdivided, provision shall be made for the extension of the drainage system by continuing appropriate drains to the exterior boundaries of the Subdivision, at such size and grade as will allow for their proper projection.

(9) Stormwater management systems shall be designed such that in 2-year, 10-year, 25-year, and 100-year storms the peak flow rate across any section of the external boundary of the Subdivision does not exceed the peak flow rate across said section of boundary prior to the Subdivision. For purposes of this calculation the ultimate anticipated development of the Subdivision shall be assumed, including but not limited to dwellings, Roadways and clearing. Calculations shall be made using Soil Conservation Service TR-20 or TR-55 Method with Type III rainfall distributions and a 24-hour duration. Rainfall data shall be based on National Weather Bureau TP-40.

(10) The plan shall include methods to control the effects from sedimentation and erosion resulting from the Subdivision both during and after construction.

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(11) Prior to installation of binder course, catch basins shall be set to binder grade and, prior to installation of the top course, catch basins shall be raised to finished grade and set in concrete.

(12) The Board may also require provision for subsoil drains, along or near the edge of the Roadway when test pits, dug at the edge of the Roadway and spaced every fifty (50) feet, indicate that groundwater or redoximorphic features (mottles) are at or within two (2) feet of the proposed grade. Subsoil drains shall also be placed at the bottom of the toe of the slope where ground water conditions (e.g. break out) in the subsoil warrant such drains.

(13) To ensure a free-flowing condition, no drainage outfall shall discharge below the seasonal high water line of a stream, swamp, or body of water. If the free-flow condition cannot be met, tailwater (surcharge) calculations shall be provided to demonstrate that the pipes will convey the runoff during all storm events.

(14) A suitable headwall or flared end section shall be provided at the outfall end of all drains. Riprap aprons shall be provided at all headwalls and flared end sections. Riprap shall be sized according to the discharge rate for the design storm.

(15) All drain manholes shall be provided with suitable steps. All drain manholes over ten (10) feet in depth shall be a minimum of five (5) feet in diameter (inside diameter).

(16) No bell ends are to be laid in manholes or catch basins.

(17) Suitable grates are to be installed at the discharge or inlet end of all drains eighteen (18) inches in diameter or larger. Grates shall be removable for cleaning.

(18) All catch basins shall discharge into a drain manhole or directly into a BMP facility. Catch basin to catch basin systems shall not be allowed.

(19) The closed storm drain system shall be of adequate capacity to accommodate flows from a 10-year storm at a minimum. Culverts shall be of adequate capacity to accommodate flows from a 50-year storm at a minimum. The calculations used to determine the size of pipes in the drainage system shall be based on the Rational Method, and shall be submitted to the Board for review and approval. Culverts shall be sized using Federal Highway Administration's HY8 procedures.

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(20) All Definitive Plans shall be reviewed to determine whether they meet the following criteria:

(a) The Subdivision shall be designed consistent with the need to minimize flood damage;

(b) All utilities and facilities, such as septic, water, gas and electrical systems are located and constructed to minimize or eliminate flood damage; and

(c) Adequate drainage systems are provided to reduce exposure to flood hazard.

(21) To minimize unnecessary costs and delays by amendments or modifications to approved Definitive Plans, Applicants are strongly encouraged to seek the approval of the Conservation Commission before the submission of the Definitive Plan, particularly as the plan relates to drainage affecting wetlands under the jurisdiction of said Commission.

(22) An Operation and Maintenance Plan shall be prepared as part of the design of the stormwater management system and other BMP facilities. The plan shall include the types of maintenance normally required and the frequency of necessary inspections and thresholds for maintenance activities. Sediment monitoring and removal methods shall be part of the maintenance plan. The stormwater management system shall be constructed for minimal maintenance. Where applicable, the maintenance plans shall specify that inspections of the stormwater management system shall be performed by a qualified professional. The plan shall be submitted to the Board for approval, and shall be included on the Definitive Plans.

(i) At the Board's option the maintenance of the stormwater management system and other BMP facilities shall be the responsibility of a single corporate entity controlled by the owners of the Lots within the Subdivision pursuant to an agreement acceptable to the Board.

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H. Driveway Entrances

In order that surface water from Roadways shall not drain onto individual Lots, driveway entrances shall be constructed so that they slope toward the Roadway for a minimum distance of four (4) feet at not less than one (1) inch per foot. All driveway entrances shown on the Definitive Plan shall be paved from the gutter line to the Right-of-way line when the binder course and the top courses have been placed on the Roadway.

I. Monuments

(1) Monuments shall be installed at: (i) Street intersections; (ii) all points of change in direction or curvature of Street Rights-of-way; (iii) points of intersection of Lot lines, Street Rights-of-way, and easements; (iv) points of change in direction or curvature of easement boundaries; (v) the center point of any Cul-de-Sac; (vi) satisfactory locations to delineate any Open Space within the Subdivision; and (vii) other points where, in the opinion of the Board, permanent monuments are necessary.

(2) Such monuments shall be of granite. Monuments shall be not less than five (5) feet in length with a three-eighths (3/8)-inch drill hole in the center, and not less than four (4) inches square in cross section.

(3) No monuments shall be installed until all construction that would destroy or disturb them is completed.

(4) The Board shall require a certificate by a registered land surveyor to be obtained at the Applicant's expense, indicating that these permanent monuments are in place and are accurately located, and such shall be indicated on the as-built plan.

J. Street Signs

Street name signs shall be furnished, set in concrete and erected at all Street intersections prior to the occupancy of any house on the Street. Signs shall be obtained from the Carlisle Department of Public Works. From the time of rough grading until such time as any Street is accepted by the Town as a public Street, sign posts at the intersection of such Street with any other Street shall have affixed thereto a sign designating such Street as a private Street.

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K. Electrical and Telephone Utilities

Electricity, cable television and telephone services and other utilities shall be installed beneath the ground in the Subdivision in accordance with accepted power, cable television, and telephone company practice, except where geological considerations, in the opinion of the Board, make such installation impractical.

L. Engineering Plan - Roadway Cross Section

The "Typical Roadway Cross Section" plan of the Carlisle Planning Board dated January 4, 1989, or as subsequently revised, is an official planning document, and is a part of these Regulations (Exhibit G). Construction of improvements shall be in accordance with the standards set forth in said cross section. Any deviation from the standards expressed in the said cross section requires a waiver and must be approved by the Board prior to Subdivision approval.

M. Guard Rails

Guard rails of a type approved by the Board shall be installed wherever grade falls more than five (5) feet below centerline grade within twenty (20) feet of the paved area of any Street, or in other cases where the Board determines that safety warrants installation.

SECTION 6. *Traffic Study*

A. General

(1) A traffic study prepared by a member of the Institute of Transportation Engineers will be required for all applications. At a minimum, the study shall document the Roadway conditions at intersections of existing Streets and proposed Streets including information on traffic volumes, speeds (both observed and posted), and sight distances.

(2) To avoid delays in the processing of an Application, consultation should be made by the Applicant with the Board during the Preliminary Plan review to determine the scope of the traffic study.

B. Scope of the Traffic Study

In addition to the information required in Article III, Section 6 (A)(1) above, the Board may require a traffic study that will include the following:

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(1) Existing traffic conditions including Street and intersection geometries within one (1) mile of any access to the Subdivision or to the next intersection with a Major Arterial Street in each direction from which traffic may be expected to access the Subdivision ("Study Area").

(2) Estimates of future traffic conditions including trip generation and distribution and levels of services for existing intersections (whether in Carlisle or another town) affected by the proposed Subdivision, taking into account impacts of other previously approved projects and projects pending approval.

(3) Traffic volume data for both AM and PM peak hours and weekend peaks, as well as average daily trips.

(4) Any proposed phasing, the impact and mechanics of which shall be outlined to the Board.

(5) Mitigation measures that could be taken to maintain or improve safety at intersections and along each Street within the Study Area.

(a) The traffic study shall make specific proposals for mitigation measures to be implemented by the Applicant and/or the Town. The Board may require some or all improvements to be completed by the Applicant as a condition of approval.

(b) The study shall take into account any improvements that may be planned by the Town of Carlisle or by the State of Massachusetts.

(6) A summary of accident data for the last three (3) years collected from the police department within the Study Area.

SECTION 7. *Erosion Control*

During development and construction, adequate protective measures shall be provided to minimize damage from surface water to the cut face of excavations or the sloping surface of fills. Land shall be developed in increments of workable size which can be completed during a single construction season. Erosion and sediment control measures shall be coordinated with the sequence of grading, development and construction operations and in coordination with the Carlisle Conservation Commission. Control measures, such as biodegradable erosion matting, hydroseeding, berms, interceptor ditches, terraces, temporary sediment basins and sediment traps shall be implemented prior to the commencement of each increment of the development/construction process in

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coordination with the Carlisle Conservation Commission. Sediment basins (debris basins, desilting basins or silt traps) shall be installed in conjunction with the initial grading operations and maintained through the development process to remove sediment from runoff waters draining from land undergoing development.

The Applicant is required to clean up any sand, silt, dirt or debris which erodes from the Subdivision onto any public Street or private property and to remove silt or debris that enters in any existing or newly constructed drainage system.

ARTICLE IV
ADMINISTRATION

SECTION 1. *Construction Management Plan*

A. Every development in Carlisle of four (4) or more residences, or a subdivision of land into four (4) or more Lots, or a non-residential development, shall require a Construction Management Plan (CMP) to be approved by the Planning Board before site work, tree removal, earth removal or demolition can commence. See Attachment D.

B. Hours of construction and hours of deliveries associated with construction activities.

Site clearing or construction work shall not occur before 7:00 AM or after 5:00 PM Monday-Friday, and shall not occur at all on Sundays or Federal and Massachusetts State holidays. On Saturdays, site clearing or construction work shall be limited to 9:00 AM - 3:00 PM. Blasting shall be limited to Monday-Friday between 9:00 AM and 5:00 PM. No vehicles shall arrive at the site earlier than 7:00 AM Monday-Friday or 9:00 AM Saturday. Any deviations from the above must be approved in advance by the Planning Board.

C. Staging and storage areas for construction materials and fill.

The location of the staging and storage areas must be approved by the Planning Board as part of any approved Subdivision. Staging and storage areas shall be located in a safe place as far from the existing private and public Ways abutting the development as practicable, and visually screened to the extent possible from such Ways and surrounding residences or other buildings.

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SECTION 2. *Inspections and Controls*

For the protection of the Town and future residents of the Subdivision, a series of inspections during the course of construction is required to ensure compliance with the approved Definitive Plan.

A. Pre-construction Conference.

A preconstruction conference with Town departments shall be held prior to the commencement of construction. The contractor shall request that the Board schedule such a conference at least one (1) week prior to commencing construction.

B. Inspection by the Board or its designated agent.

No water main, storm drain, catch basin, utility installation, Road subgrade or foundation, or any other item of work designated for inspection, shall be backfilled or paved over until inspected by the Board or its representative. The contractor shall be responsible for providing the following for each inspection: complete set of endorsed plans, properly calibrated transit or level, rod and tape. Also, the contractor or one of his laborers shall be available to assist the inspector when necessary.

C. Inspection requests.

Inspections shall be requested by the Applicant at least two (2) full working days (48 hours) in advance by written notice to the Board and to its duly authorized representative.

D. Inspections required.

(1) The following inspections shall be required, at a minimum:

(a) Roadbed inspection: following excavating of the roadbed, but prior to any backfilling. This inspection is conducted after all clearing and grubbing to determine if all unsuitable materials have been removed where required.

(b) Drainage inspection: following installation of drain pipe, culverts, catch basins and all related construction, but prior to backfilling.

(c) Underground utilities inspection: following laying of electric, telephone, gas, cable and any fire systems in Roadway and to individual dwellings but prior to backfilling.

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(d) Inspection of subgrade: Before subbase is spread, the subgrade shall be shaped to a true surface conforming to the proposed cross section of the highway and compacted. The contractor shall submit a gradation test on the Roadway base material to ensure compliance with specifications.

(e) Finished gravel foundation inspection: following application, grading and compaction of gravel foundation. This may include compaction testing.

(f) Binder course inspection: Notice shall be given of the time of application of the binder course. Inspection shall occur during the application.

(g) Finish course inspection: Notice shall be given of the time of application of the finish course. Inspection shall occur during the application.

(h) Final inspection: following completion of all Subdivision improvements, including, installation of permanent monuments, seeding and cleanup. The entire Subdivision must be cleaned up so as to leave a neat and orderly appearance free from debris and other objectionable materials.

The Applicant shall not proceed with construction of any of the above stages of development until the Applicant's Engineer of Record has certified completion of the previous stage, including certification of completeness of each pavement course, such certification to be reviewed and confirmed by the Board's consulting engineer, with exceptions only by written approval of the Board.

(2) The Board shall make such other inspections of the project as it deems necessary to ensure safe and proper construction of the project.

(3) Failure of the Applicant to notify the Board as required herein or comply with the inspection procedures herein shall result in the Board (A) requiring any work not inspected as a result of such failure, at the Applicant's expense, to be removed or to be exposed in order that the proper inspection may be made, or (B) rescinding approval of the Plan in accordance with the Subdivision Control Law.

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SECTION 3. *Earth Removal and Fill.*

A. Required Information

If earth removal or fill is associated with the construction of the Subdivision Streets and drainage, the Applicant shall provide the following information:

(1) Amount of earth to be removed or filled;

(2) Proposed disposition of such earth; and

(3) Method of removal and fill, including the means proposed to prevent erosion and sedimentation and to protect adjacent areas.

The Board may prescribe conditions of operations and such conditions will become part of the Subdivision approval.

Any area within the Subdivision used for the extraction of gravel or fill shall be regraded, loamed, and in sod before final release of any performance guarantee is granted by the Board.

B. Rock Excavation

(1) Any required rock blasting shall be done by licensed persons only and shall be carried out in strict accordance with the existing governmental ordinances and regulations. A blasting permit must be obtained from the Fire Chief having jurisdiction over the area. Any damage to the work or property of others caused by blasting operations shall be repaired at the expense of the Applicant.

(2) Whenever the bottom of a trench is rock or boulders, it shall be excavated six (6) inches below grade and refilled to grade with gravel compacted in place. The sides of the trench in rock shall be excavated to such width that no rock shall be closer to the pipe barrel or other structures than six (6) inches when the pipe is laid in the trench with a normal alignment.

SECTION 4. *Enforcement*

Chapter 41, Section 81Y shall govern the enforcement of these Rules and Regulations. The following shall be printed as notes on any approved Subdivision Plan prior to endorsement:

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"No building permit shall be issued for the construction of any building or structure located on a Lot subdivided in violation of the provisions of the Town of Carlisle Subdivision Rules and Regulations. No building permit shall be issued for the construction of any building or structure or a Lot within the Subdivision until the Applicant has provided evidence to the Building Inspector of the recording at the Registry of Deeds (or filing with the Land Court, as the case may be) of the Board's decision granting approval of the Definitive Plan and all deeds, easements, covenants and Lot releases pertinent thereto, and of the Definitive Plan."

SECTION 5. *Miscellaneous*

A. Severability

If any section, paragraph, sentence, clause or provision of these Rules and Regulations shall be adjudged not valid, the adjudication shall apply only to the materials so adjudged, and the remainder of these Rules and Regulations shall be deemed to remain valid and effective. Any part of these Rules and Regulations subsequently invalid by any federal or state law or modification or the modification of an existing federal or state law shall automatically be brought into conformity with the new or amended law and shall be deemed to be effective immediately, without recourse to a public hearing and the customary procedures for amendment or repeal of such regulations.

B. Incorporation by Reference

For matters not covered by these Rules and Regulations, reference is made to M.G.L., Chapter 41, Sections 81K to 81GG, inclusive, as amended.

C. Amendments

These Rules and Regulations or any portion thereof may be amended, supplemented or repealed from time to time by the Board after a public hearing, as provided by M.G.L., Chapter 41, Section 81Q, as amended.

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Attachment A

Development Standards

I. General Development Standards

A. Introduction: All land development projects in Carlisle shall, as applicable to particular projects and properties, conform to current zoning and land use regulatory standards, including, but not limited to, the Carlisle Zoning Bylaws, the Subdivision Rules and Regulations, the Common Driveway Rules and Regulations, the Conservation Cluster Rules and Regulations and the Senior Residential Open Space Community ("SROSC") Rules and Regulations adopted by the Planning Board, the Water Supply and Sewage Disposal Regulations adopted by the Board of Health, and the Wetlands Protection Bylaws and Regulations adopted by Town Meeting and the Conservation Commission (collectively, "Land Use Standards").

In keeping with over 200 years of development history in Carlisle, new development should be consistent with the immediate neighborhood, make a concerted effort not to detract from existing homes and land development patterns, and assure that development will not adversely impact the environment, particularly the private water sources exclusively relied upon by Carlisle residents. The Town has limited water resources, and has no piped water system—but rather, all homes, businesses, and municipal users rely on individual on-site water wells—and no public wastewater treatment system. Two-acre zoning (one acre in the Town Center) is thus important to the Town of Carlisle to protect water availability and quality. Further, Carlisle has a small population of barely over 5,500 people, a limited tax base, no public transit, and lacks the roadway and utility infrastructure required to support commercial development or other dense development. As a result, the Planning Board must be sensitive to the burden and impact of any increase in housing density.

B. Developments shall:

1. Minimize, to the extent possible, the following:

(a) Alteration of ground water, septic water levels or chemical constituents;
(b) Alteration or relocation of water ways and drainage patterns;
(c) Disruption, reduction of capacity, contamination, and other adverse effects on existing on site and off site drinking water wells;
(d) Any use of groundwater for irrigation of landscaping;

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(e) Alteration of existing, natural grades, and overall volume of cut and fill;
(f) Area over which existing vegetation will be disturbed, especially if within 200 feet of a river, pond or stream, or having a slope of more than 15%;
(g) Removal of trees greater than eight inches (8") in diameter, measured at four feet (4') above ground;
(h) Soil loss or instability during and after construction;
(i) Alteration or disturbance of land within any flood plain or wetlands area;
(j) Blockage of trails or potential trails;
(k) Disturbance of important wildlife habitats or corridors, outstanding botanical features, or scenic or historic features;
(l) Removal of existing stone walls, whether along the boundary of the Development or within the Development;
(m) Visual prominence of man-made elements which are not necessary for safety or orientation including visibility of building sites from existing streets and existing protected open space;
(n) Blockage of vistas through new development; and
(o) Number of driveways exiting onto existing streets.

2. Maximize, to the extent possible, the following:

(a) Preservation of uncontaminated water resources for drinking water and preservation of legal and practical functionality of existing drinking water wells and existing septic systems;
(b) Recharge of the underlying water aquifer;
(c) Visual prominence of natural features of the landscape;
(d) Legal and physical protection of views from public ways and existing protected open space;
(e) Connections via publicly accessed trails to and between protected open space and other trails;
(f) Buffers for and connections among existing protected open spaces;
(g) Wildlife corridors;
(h) Preservation of: (a) stone walls, by locating Lot and Parcel boundaries along the existing line of the walls; and (b) scenic points as identified in the Massachusetts Landscape Inventory and historic sites as identified by the Massachusetts Historical Commission, by incorporating them within public open space or easements as provided by the relevant regulation(s); and
(i) Curvilinear street patterns;

C. Units per acre: As noted above, all land development projects in Carlisle shall, as applicable, conform to current zoning—including density—requirements.

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D. Architecture: Detached and attached housing units should be designed to reduce overall visual massing and to blend compatibly with the landscape and with surrounding single-family residential neighborhoods. Building design, including exterior materials, should be in harmony with and enhance the town's existing and historic architectural traditions. The appearance of a gated community is discouraged. The architecture should also provide visual and acoustical screening of HVAC units.

E. Site planning, Height, Set-Backs, Screening, Landscaping, and Lighting: All developments should provide visual screening consistent with the density and setback requirements included within the Zoning Bylaws and incorporated into the engineering design standards of the Carlisle Subdivision Rules and Regulations, Conservation Cluster Regulations and SROSC Regulations, as applicable. An adequate vegetative buffer should be provided to minimize the visual impact of the development from existing roadways, from protected open space, and from existing and future housing development. Similarly, all developments should rely on and protect the natural features of the site such as open meadow, woodland, hillsides, rock outcroppings, water bodies, open vistas, valuable habitat and wildlife corridors, existing and potential trail connections which can provide public accessibility to open space, and buffers for and connections among existing protected open spaces through careful siting of roadways and structures. Exterior lighting should not impact adjacent residential areas or degrade wildlife habitat. The project design should to the extent possible preserve the existing and natural landscaping, and additional landscaping should be provided using water efficient plantings of a variety of native species to minimize and if possible eliminate irrigation and to provide visual and noise screening of the development from the street, abutting properties and protected open space. Building height should conform to the requirements of the Zoning Bylaws. Safe and convenient entrance and exit from the proposed development to public streets is required. There should be appropriate street access for the size of the development.

F. Open Space: Consistent with the requirements of the Carlisle Zoning Bylaws and regulations, including, but not limited to the Subdivision Rules and Regulations, the SROSC Regulations, and Conservation Cluster Regulations, as applicable, all developments should to the extent possible set aside, for perpetual protection, sufficient open space to serve the needs of the project residents and ensure that the proposed project is integrated within the existing neighborhood. Open Space is defined as land that is not covered with buildings, roadways, parking or any other structure or impervious surface. Open Space should be selected to provide for recreation purposes and/or to maximize the value of wildlife habitat, should be contiguous to the extent required to preserve significant habitat, should be configured to maximize and preserve large blocks of undisturbed land and should encourage passive recreational opportunities for residents and the public where possible. Open Space should predominantly be left in a natural, undisturbed state. Landscaping of Open Space areas should utilize native vegetation to the extent practical, and should complement the values and functions of the natural resources on the site. In any developments proposed to be denser than underlying zoning would otherwise allow, Open

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Space is critical to protect the private water sources exclusively relied upon by residents in Carlisle.

G. Development Infrastructure: To avoid adverse environmental and public health impacts, to avoid costly and potentially severe impacts and liability to the applicant, future owners and renters at the development, and abutters from a future failure of on-site and/or off-site drinking water supply wells and wastewater disposal systems (such impacts potentially including but not limited to revocation of the project's and/or abutters' certificates of occupancy for failure to have a safe drinking water supply), and to avoid costly future maintenance problems for future owners and renters at the project, the Board requires compliance with all applicable local Board of Health regulations governing wastewater disposal and water supply development as applied by the Board of Health. The Planning Board will endeavor to coordinate its consideration of applications before it with the Board of Health either through the processes described in Attachment B or otherwise.

H. Green Development Practices: All developments should, to the greatest extent practicable, include strategies for environmentally responsible design as formalized in Leadership in Energy and Environmental Design (LEED) standards, NAHB Model Home Building Guidelines or the ICC National Green Building Standard, all of which minimize the depletion of natural resources; control erosion and minimize impact on natural areas; use native and water efficient plants in landscaping; increase energy efficiency in construction and operations; conserve water through use of efficient fixtures and appliances and irrigation systems using rainwater and greywater; and use environmentally "friendly" materials. To this end, the development should incorporate Low Impact Design (LID) techniques to the greatest extent practicable. The greater the density of the development, the more important the use of these techniques becomes to protecting the environment and on site and off site individual water wells, which are the exclusive source of drinking water for all residents, businesses and municipal users in Carlisle.

II. Specific Development Standards

A. *Zoning Bylaws*

The Carlisle Zoning Bylaws were adopted and are amended by Carlisle Town Meeting in accordance with and subject to the provisions of the Zoning Act, M.G.L., Chapter 40A, Sections 1-17. The Zoning Bylaws are applicable without exception, to all land development and land use projects within the corporate boundaries of Carlisle.

Without limiting the above and the Town's desire that all provisions of the Carlisle Zoning Bylaws be satisfied in any development, the following are specific examples of development standards to be applied in all situations, as applicable and subject to applicable law, including without limitation the provisions of the Carlisle Zoning Bylaws:

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1. Density — Density shall be controlled by the provisions of the Zoning Bylaws, including but not limited to, Sections 4.1.1, 5.5 and 5.7.4.

2. Setbacks — No building shall be erected or altered so as to extend nearer to the line of any street or nearer to its front lot line, where different, than forty (40) feet and no building shall be erected or altered so as to extend nearer to any side or rear lot line of its lot than forty (40) feet. In addition, in non-traditional developments (developments other than single family homes on individual building lots conforming to the Zoning Bylaws and local boards' rules and regulations), such as a development with attached homes or density not following Section 4.1.1 of the Zoning Bylaws, all residential buildings are to be located at least 100 feet from the boundary of the property subject to the development, at least 50 feet from any Open Space, and at least 30 feet from other residential buildings, as set forth in Section 5.7.4.16 of the Zoning Bylaws.

3. Height — No building shall be erected or altered so as to contain more than two and one-half (2 1/2) stories or to exceed more than forty (40) feet in height, however, where the setback of the building from the street and the minimum distance of the building from each lot line all exceed the minimum distances required above by at least ten (10) feet, said building may be erected or altered to contain three (3) stories and to have a height of not over forty-five (45) feet.

4. Lot Coverage — No building shall be erected to cover, together with all other buildings within the development, more than twenty-five per cent (25%) of the total area of the Project.

5. Units on Common Drives — Drives and roads that are not built to the standards for a roadway that may be accepted by the Town as a public way should limit the number of homes or units within the development to no more than six.

In the event of a conflict between the provisions above and the Carlisle Zoning Bylaws, the Carlisle Zoning Bylaws shall control.

B. *Subdivision Rules and Regulations, Rules and Regulations Regarding Special Permits for Conservation Clusters, Common Driveways and SROSC*

The Carlisle Subdivision Rules and Regulations were adopted and are amended by the Carlisle Planning Board in accordance with the Subdivision Control Law. The Subdivision Rules and Regulations include specific engineering criteria for the layout and construction of roads, utilities and other infrastructure and are based upon historic and time-tested analysis of pedestrian and vehicular safety, stormwater management and the maintenance of public and private

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infrastructure. Accordingly, subject to applicable law the specific design requirements of the Subdivision Rules and Regulations apply to all development projects involving the layout and construction of a roadway and other infrastructure regardless of whether the roadway and other infrastructure involves the division of land into two or more lots, unless waived by the Planning Board in accordance with the Specific Regulations.

Without limiting the above and the Town's desires that all provisions of the applicable rules and regulations of the Town be satisfied in any development, the following are specific examples of development standards to be applied in all situations subject to applicable law, unless waived by the Planning Board in connection with any specific application:

1. Utilities — Utilities serving any development shall be either buried or substantially concealed by mature woods.

2. Roadways and Common Driveways
    a) Any driveway shared by more than one home or unit ("common driveway") shall have a traveled way at least 12 feet wide that can be maintained as such throughout the year. In addition, there shall be two shoulders, each at least two feet wide, for a total drive width of at least 16 feet.
    b) A common driveway shall be at least 40 feet from the outer lot lines of the land being developed.
    c) Where a common driveway exceeds 300 feet in length, turnouts shall be installed and maintained (e.g. gravel and/or snow storage shall be prohibited) at reasonable intervals along the driveway, but at least every 300 feet, in order to allow vehicles to pass. Where the common driveway exceeds 300 feet in length, it shall end in a circle with a radius of no less than 25 feet.
    d) A common driveway shall not be longer than 1,000 feet. No part of a roadway shall be more than one thousand (1000) feet measured by the centerline from the point of closure referred to in the definition of a Dead-end Street in Article II, Section 1 of the Subdivision Rules and Regulations.
    e) A roadway that provides access to more than six (6) but fewer than eleven (11) units shall conform to the following requirements of Article III, Section 2.D of the Subdivision Rules and Regulations:
        i. Dead-end Streets shall be provided at the closed end with a Cul-de Sac turnaround having an outside street line diameter of one hundred and sixty (160) feet, with an outside diameter of the paved surface of one hundred and forty (140) feet. A landscaped island having a diameter of one hundred (100) feet shall be provided in the center of the turn-around and the natural vegetation should be retained where possible; in areas that cannot retain the natural vegetation, a landscaping plan shall be provided for the Cul-de-Sac island.

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ii. A Cul-de-Sac of a dead-end roadway shall not have a slope in any direction of greater than 2%.

iii. No more than three dwelling units shall be accessed directly from a Cul-de-Sac.

f) A development shall not have fewer than two (2) noncontiguous accesses with existing Town roads except in a development of ten (10) or fewer homes or units having legal frontage on a single dead end street. Roads within a development shall be laid out such that the closure of any single road will deny access to no more than 10 homes or units.

g) At locations where on-site roadways intersect existing Town roads, sight distances shall comply with AASHTO standards for the 85-percentile speed measured along the existing roadway. No intersection shall occur at a point where grades along the existing road are in excess of 5 percent.

h) Where the grade of any driveway or roadway at the approach to an intersection exceeds two percent (2%), a leveling area shall be provided having not greater than two percent (2%) grades for a distance of not less than fifty (50) feet, measured from the edge of pavement of the intersecting road.

i) Curbing shall be required for the full length of a roadway if any part of the roadway exceeds three percent (3%) grade, except where alternate means of flow and erosion control is proposed.

3. Access to Water Source for Fire Safety — All homes and units within a development shall have access to an adequate source of water to ensure satisfactory fire protection, as determined by the Planning Board in consultation with the Fire Chief.

4. Stormwater Management — Storm drainage for the development shall comply with the provisions of Article III, Section 5.G of the Subdivision Rules and Regulations.

5. Water Balance — A hydrologic water balance calculation for pre- and post-development conditions based on annual precipitation that quantifies evapotranspiration, runoff, recharge, and water usage flow shall be included in any development of greater than four (4) lots or dwelling units.

In the event of any conflict between the above stated standards and those in the Carlisle Zoning Bylaws or the applicable Specific Regulations, the Zoning Bylaw shall first control, then the Specific Regulations, then the standards set forth herein.

C. *Board of Health Regulations*

The Carlisle Board of Health Regulations were promulgated and are enforced by the Carlisle Board of Health in accordance with M.G.L., Chapter 111, Section 31. The Regulations include

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specific requirements and carefully calibrated standards for the development of drinking water wells and wastewater disposal systems as the Town has no municipal water system—but rather, all homes, businesses, and municipal users rely on individual on-site water wells. The Town also has no public wastewater treatment system, relying exclusively on individual private septic systems. The Board of Health Regulations controlling wells are intended to protect the public health and general welfare by ensuring that all wells are constructed in a manner that will protect the quality of the groundwater derived from these wells. Accordingly, the Board of Health adopted local Water Supply Regulations for private wells and Supplementary Regulations for Sewage Disposal Systems for the Town of Carlisle with stated objectives as follows:

1. The Carlisle Board of Health feels the long term health interests of the Town can only be served by adopting certain regulations which are stricter than Title 5, which was written as a minimum protection standard in 1977, revised in 1995 and in 2006 and designed to cover all towns in Massachusetts utilizing subsurface disposal systems;

2. Carlisle has no town water backup. Unlike a number of Massachusetts towns covered by Title 5, if a residence or a business loses a well to pollution, there is no town water which can be brought in, nor any town wells at all;

3. Carlisle geographically is an area of extensive wetland, high water table, and extensive ledge. Safeguards in the original septic system installations are necessary because alternative repair locations are often unavailable;

4. Carlisle presently has no municipal sewerage to hook up to in cases of septic system failure; and

5. Current estimates indicate that the distance viruses and bacteria travel is much greater than previously estimated. In Carlisle, where groundwater travels some distance through bedrock crevices, pollution may not be adequately filtered in gravel or sand with Title 5 percolation rates used for design.

The general purpose of the aforementioned Regulations is to protect, preserve, and maintain the existing and potential groundwater supply, and groundwater recharge areas for the safety of the public health and the environment of the Carlisle community given the town's exclusive reliance on private water supplies.

The Carlisle Board of Health regulations will be administered by the Board of Health. The Planning Board will endeavor to work closely with the Board of Health on any application before the Planning Board.

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Attachment B

Policy Governing Use of Town Advisory Groups

Introduction

Land development in Carlisle raises concerns not found in many other eastern Massachusetts communities. The Town has no piped water system. All homes, businesses and municipal users rely exclusively on individual on-site water wells. The Town also has no public wastewater treatment system.

Carlisle also contains lands with abundant bedrock outcrops, variable soils, vast wetland and open space resources and an historic road network largely unchanged since the Revolutionary War. These facts require Carlisle's land use boards, commissions and departments (collectively, "local boards") to review development projects more intensely than would be required in other communities and with a greater sensitivity toward concerns of cumulative impacts from projects that could initially or, over time, lead to significant degradation of the Town's resources and limited infrastructure. Accordingly, the Planning Board ("Board") hereby adopts the following Policy Governing Use of Town Advisory Groups to apply to all development projects before the Board.

After the filing of a development application before the Board that proposes to create four (4) or more dwelling units, or to divide a parcel of land into four (4) or more lots, or anticipates the disposal of greater than 1,500 gallons per day of wastewater, the Board shall notify, as deemed necessary and applicable by the Board depending upon the nature of the application, the Board of Health, Conservation Commission, Historical Commission, Fire Department, Police Department, Building Commissioner and/or the Board of Selectmen of the application by sending such entity a copy of the application and accompanying plans and related materials. It may also invite the participation of each entity or their designee during the public hearing on the application, if applicable, or at anytime while the public record is open on the application.

Use of Town Advisory Groups

Carlisle's regulatory and adjudicative boards, committees and agencies have, at times, found it beneficial to utilize the services and advice of a Town Advisory Group ("TAG") when conducting reviews of proposed development projects. A TAG will consist of representatives from key land use boards and Town staff with the relevant expertise necessary to assist the local board or agency in conducting its due diligence review of an application.

The use of an advisory group is seen as benefiting both the Town and the applicant for a development permit, endorsement or approval. It is not intended to add an additional layer of formal review nor should it cause the review process to be lengthened. It is intended that the

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TAG will seek to clarify, frame or resolve issues outside of the formal hearing process and to then provide recommendations to the Board and/or any other local board which may be considering the development for the consideration of the Board and/or such other local board.

Upon receipt and review of an the application, the Board should determine whether it would be beneficial to form a TAG for purposes of assisting the Board and/or any other local boards in its response to the proposed development. Once formed, the TAG members shall appoint the TAG chair.

Work Sessions

a) Work sessions may be held which may include the applicant, the TAG, officials of the Town of Carlisle, and the Town's reviewing consultants for the purposes of discussing the findings and recommendations of the reviewing consultants, discussing, where relevant, any waivers requested from local regulations, discussing issues raised at public hearings and discussing proposed approaches to address procedural and substantive matters raised by the development application.

b) Work sessions shall conform to the requirements of the Open Meeting Law and Public Records Law.

c) Work sessions shall focus on the information presented during the public hearing process and no new information, materials or testimony shall be considered part of the formal record before the relevant reviewing local board. No materials submitted during a work session by the applicant for a development permit or other approval or by a public official or local board member shall be deemed part of the formal Board or other local board record unless and until such material is submitted to the Board or other local board, as applicable, during a public hearing.

d) A summary of the work session(s) shall be presented by the TAG at a public hearing on the application for which the TAG was convened, if and when such hearing is opened. Recommended solutions of issues discussed at work sessions shall be presented to the Board, and if applicable, other local boards, for its consideration. The Board and the other local boards, as applicable, may accept, reject or modify any recommendations offered by the TAG.

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Attachment C

Agreement for Reimbursement of Expenses
and
Certification of Accuracy of Application

Whereas the undersigned applicant has petitioned the Carlisle Planning Board ("Board") for approval of a permit and whereas the Town of Carlisle has authorized the Town Clerk / Treasurer to charge for reimbursement of legal, consulting and incidental expenses incurred on behalf of and/or for the benefit of third parties for services rendered by the Town of Carlisle;

And whereas the undersigned has requested services and/or authorizations of the Town of Carlisle that may result in the necessity to incur legal, engineering, consulting or incidental expenses on behalf of the undersigned or in consideration of the request submitted by the undersigned;

And whereas the applicant's petition contains affirmative statements upon which the Town is asked to rely;

Now, therefore, it is agreed that the undersigned will, in accordance with all applicable law, make payment to the Town of Carlisle by providing payment to the Carlisle Town Clerk / Treasurer within five (5) days of receiving a written request for payment by the Town or its appointed designee for all anticipated and reasonable legal, engineering, consulting and incidental expenses incurred by the Town for the benefit of the undersigned or for the consideration of the request submitted by the undersigned, all as authorized by these Regulations and M.G.L., Chapter 44, Section 53G.

This Agreement shall be signed prior to the initiation of any action by the Board including the opening of a public hearing, where relevant.

I, as the Applicant/Agent for a permit before the Board, hereby consent to the terms of this Agreement and verify, under the pains and penalties of perjury that the application and its content are accurate and complete as of the date executed below.

_____ _____
Signature of Petitioner(s) Date

_____ _____
Signature of Agent(s) Date

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Attachment D

Construction Management Plan

Subject to applicable law, every development in Carlisle of 4 (four) or more residences, or a subdivision of land into 4 (four) or more lots, or a non-residential development, shall require a Construction Management Plan (CMP) to be approved by the Planning Board in consultation with the Police Chief, Fire Chief and DPW Superintendent, before site work, tree removal, earth removal or demolition can commence. The purpose of the CMP shall be to safeguard the public health and safety, and to maintain ways against extraordinary wear or damage that may be caused by construction operations, as well as to minimize the impact of construction operations on the quality of daily life in the Town.

The CMP shall describe methods of operations, times and durations, and special precautions and measures to be taken by the applicant and/or its contractor during each phase of the development to accomplish these goals.

The CMP shall address the following issues during each stage of construction, to the extent applicable on a given project:

A. Noise Control

B. Hours of construction and hours of deliveries associated with construction activities.

C. Truck routes

D. Trash and debris removal plan

E. Traffic and Parking Control (during construction)

F. Police details, if required (at the applicant's expense)

G. Communications (with neighborhood liaison or committee)

H. Emergency contacts/numbers

I. Dust Control

J. Public street cleaning and repair

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K. Planned occupancy of public ways

L. Erosion control

M. Tree protection plan

N. Wildlife displacement provisions

O. Blasting Plan and all related issues

P. Temporary Fire protection measures

Q. Fire/emergency equipment access

R. Project Signage

S. Pest Control

T. Construction Staging Plan including:

(1) Site office trailers

(2) Storage trailers/containers

(3) Staging and storage areas for construction materials and fill.

(4) Delivery truck holding areas

(5) Significant equipment to be utilized

(6) Snow removal

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EXHIBIT A

Town of Carlisle

FORM A

APPLICATION FOR ENDORSEMENT OF PLAN BELIEVED NOT TO REQUIRE APPROVAL

File one completed form with the Planning Board and one copy with the Town Clerk in accordance with the requirements of Article II Section 4.

No._____ Date_____

To the Planning Board:

The undersigned, believing that the accompanying plan of his/her property in the Town of Carlisle does not constitute a Subdivision within the meaning of the Subdivision Control Law, herewith submits said plan for a determination and endorsement that Planning Board approval under the Subdivision Control Law is not required.

1. Name of Applicant_____

   Address_____

2. Name of Engineer or Surveyor_____

   Address_____

3. Deed of property recorded in _____Registry,

   Book_____Page_____

4. Location and description of Property:

Signature of owner_____

Address_____

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EXHIBIT B

FORM B

APPLICATION FOR APPROVAL OF A PRELIMINARY PLAN

Date_____

To the Planning Board of the Town of Carlisle, MA:

The undersigned, being the applicant as defined under M.G.L., Chapter 41, Section 81L, for approval of a proposed Subdivision shown on a plan entitled:

_____

_____

By_____ dated _____, _____

and described as follows:

_____

located _____

number of lots proposed _____total acreage of tract _____, said applicant hereby submits said plan as a *Preliminary* Subdivision plan in accordance with the Rules and Regulations of the Carlisle Planning Board, and makes application to the Board of approval of said plan.

The undersigned's title to said land is derived from _____

_____

By deed dated _____ and recorded in the North Middlesex District Registry of Deeds Book _____, Page _____, registered in the North Middlesex Registry District of the Land Court, Certificate of Title No.:

_____

Received by Town Clerk:

Date_____

Time_____

Signature_____

Received by Board of Health:

Date_____

Time_____

Signature_____

Applicant's Signature _____

Applicant's address _____

_____

Applicant's phone # _____

Owner's Signature (if not the applicant) _____

Owner's Address _____

_____

Owner's Phone_____

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EXHIBIT C

FORM C

APPLICATION FOR APPROVAL OF A DEFINITIVE SUBDIVISION PLAN

Date_____

To the Planning Board of the Town of Carlisle, MA:
The undersigned, being the applicant as defined under M.G.L., Chapter 41, Section 81L, for approval of a proposed Subdivision shown on a plan entitled:

_____
_____

designed by _____ dated _____, _____
and described as follows: located

_____

number of lots proposed _____total acreage of tract _____, said applicant hereby submits said plan as a *DEFINITIVE* Subdivision plan in accordance with the Rules and Regulations of the Carlisle Planning Board, and makes application to the Board for approval of said plan.
The undersigned's title to said land is derived from _____

_____

By deed dated _____ and recorded in the North Middlesex District Registry of Deeds Book _____, Page _____, registered in the North Middlesex Registry District of the Land Court, Certificate of Title No.: _____; and said land is free of encumbrances except for the following: _____

_____

Said plan has ( ) has not ( ) evolved from a preliminary plan submitted to the Board on _____ and approved (with modifications) ( ) disapproved ( ) on _____.

The undersigned hereby applies for the approval of said DEFINITIVE plan by the board, in belief that the plan conforms to the Board's Rules and Regulations.

Received by Town Clerk:	Received by Board of Health:
Date_____	Date_____
Time_____	Time_____
Signature_____	Signature_____

Applicant's Signature _____
Applicant's address

_____

Applicant's phone # _____

Owner's Signature (if not the applicant) _____
Owner's Address _____
Owner's Phone_____

DRAFT

EXHIBIT D

Development Impact Report

The purpose of the Development Impact Report (DIR) is to enable the officials of the Town to determine what methods are used by the Applicant to promote the environmental health of the community and to minimize adverse effects on the natural resources of the town. This statement will also address the economic impact resulting to the town as the result of the Subdivision, as well as its effects on town demographics and traffic during and after construction.

The DIR seeks to identify the broad range of issues generally associated with the Subdivision in a form and in language that is understandable to a layperson. It assesses development impacts which could possibly be avoided or mitigated if recognized early in the development process. Other portions of the DIR request information which will help the Town plan ahead and insure adequate services in the future. It is the intent of the Planning Board that the preparation of the DIR, along with early consultation with the Board and its staff, will foster a development of excellent quality and design sensitive to Carlisle's natural and historic heritage and other community concerns.

It is recommended that the content of the DIR be discussed with the Planning Board as soon as possible, prior to the filing of the Definitive Plan.

The DIR shall be filed with a Definitive Subdivision Plan. The DIR shall clearly and methodically assess the relationship of the proposed Subdivision to the natural, physical, and social environment. In preparing the DIR, professionals of the respective fields of analysis shall be consulted where necessary.

The DIR shall include the following:

<u>Physical Environment</u>

- Describe the general physical conditions of the site, including amounts and varieties of vegetation, general topography, significant geologic, scenic and historic features, trails and open space links, and indigenous wildlife.

- Describe how the Subdivision will affect these features.

- Provide a complete physical description of the Subdivision, and its relationship to the surrounding area.

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Human Environment

- Provide an estimate in tabular form of anticipated buildings (number of bedrooms, floor area, etc. per unit, enclosed garage space and ground coverage), and a summary showing the percentage of the tract to be occupied by buildings, paved areas (including roads), and open land.

Water and Soils

- Describe location, extent and type of existing water bodies and wetlands, including existing surface drainage characteristics, both within and adjacent to the Subdivision.

- Describe the methods to be used during construction to control erosion and sedimentation. Include any proposed blasting, earth removal or filling.

- Describe the permanent methods to be used to control erosion and sedimentation.

- Evaluate the impact of sewage disposal methods on quality of sub-surface water including, but not limited to, existing and potential well water supplies.

Town Services

- Describe the effect of the Subdivision on police and fire protection needs.

- Describe the effect of the Subdivision on public works department services.

- Describe the effect of the Subdivision on educational services. Project the number of additional school age children and provide the distance of the Subdivision to the Carlisle Schools.

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EXHIBIT E

	Local Road/Street	Collector Road/Street
Design Speed:	25 mph	30 mph
Horizontal Design Standards		
Minimum Centerline Radius	125 feet	150 feet
Maximum Radius at Intersections		
Intersecting Street	125 feet	150 feet
Main Street	150 feet	200 feet
Superelevation	as appropriate	as appropriate
Minimum Tangent Between Curves	50 feet	50 feet
Width of Right-of-Way	50 feet	50 feet
Pavement Width	20 feet	20 feet
Vertical Design Standards		
Minimum Grade	0.50%[a]	0.50%[a]
Maximum Grade	8%[b]	6%[b]
Crest Vertical Curve	K=16	K=28
Sag Vertical Curve	K=24	K=35
Maximum Grades at Intersections		
Intersecting Street	2% within 50 feet of edge of main street	2% within 50 feet of edge of main street
Main Street	5% within 75 feet of cross-street centerline	5% within 75 feet of cross-street centerline
Stopping Sight Distances[c]	150 feet	200 feet

[a] Minimum grade shall be 1% where curbing is proposed.

[b] Maximum grade for Local streets is 6 percent when the radius is less than 200 feet.

[c]For Reference. AASHTO Table III-1 shall govern, including adjustments for grades. Easements for sight distances may be required if conditions warrant.

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EXHIBIT F

Carlisle Planning Board Application Fee Schedule
Fees Revised March 2007

Approval Not Required Filings (ANR)

1) For each plan that creates no new boundary lines: Filing fee, per plan $200

2) For each plan that creates new boundary lines: Filing fee, per plan $200; Per Lot/Parcel created $250

3) If requested, a Project Review Deposit of $1,000.

Preliminary Plan For Subdivision of Land

1) Application fee $1,500 plus $200 per Lot

If the Applicant submits a conceptual plan as referenced in Article II, Section 5.A of the Rules & Regulations, then the Application Fee will be $500 plus $100 per Lot

2) Project Review Fee $1,000

Additionally, during the Preliminary Review process, the Definitive Subdivision Project Review Fee Deposit will be estimated. The amount of the Definitive Subdivision Project Review Fee Deposit will reflect the anticipated consultant fee(s) plus 10%.

Definitive Plan for Subdivision of Land

1) Application fee $5000 plus $1000 per Lot

If the Applicant has participated in the Preliminary Plan process as referenced in Article II, Section 5.B of the Rules & Regulations, then the Application Fee will be $2500 plus $500 per Lot.

2) Project Review Fee Deposit $10,000

Note: If the Applicant has participated in the Preliminary Review Process, then the Definitive Plan Project Review Fee Deposit will have been determined at that time. The amount of the Project Review Fee Deposit will reflect a more accurate estimate of the anticipated consultant fee(s) plus 10%.

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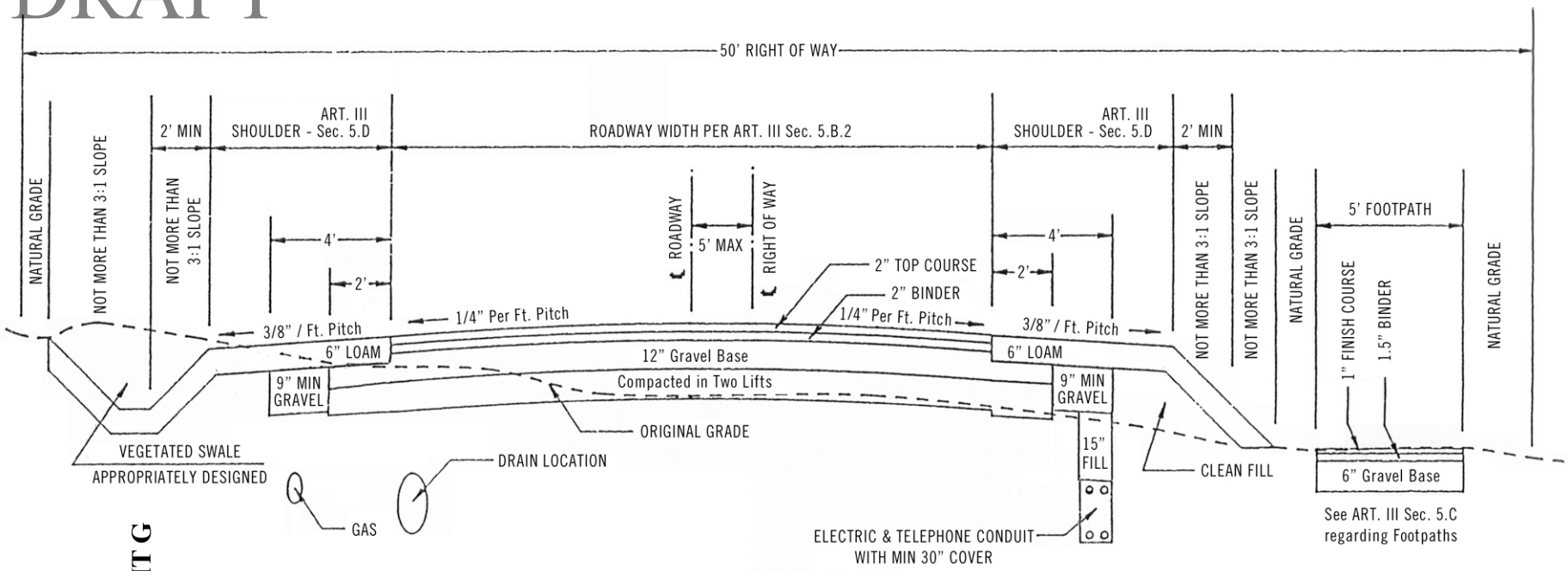

EXHIBIT G

CUT SECTION

FILL SECTION

TYPICAL ROADWAY CROSS SECTION
CARLISLE PLANNING BOARD
SUBDIVISION RULES & REGULATIONS
EXHIBIT G
JANUARY 4, 1989
Revised 4/27/98 and 3/8/10