

**Land Subdivision
Rules and Regulations
of the
Planning Board
of the
Town of Millis
Massachusetts**

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**Land Subdivision Rules and Regulations
of the Planning Board
of the Town of Millis, Massachusetts**

SECTION 1

SCOPE

1.1 Title

These rules and regulations shall be known and may be cited as the *Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts*.

1.2 Authority and Effect

These rules and regulations are hereby adopted by virtue of the pursuant to the authority granted the Planning Board of the Town of Millis by Chapter 41, Section 81-K to 81-GG, of the General Laws of the Commonwealth of Massachusetts herein called the Subdivision Control Law, as now existing or hereafter amended as if these sections were set forth herein at length.

1.3 Purpose

These rules and regulations have been adopted to fulfill the purpose of the Subdivision Control Law as stated in the General Laws of the Commonwealth of Massachusetts, Chapter 41, Section 81-M and all other applicable sections.

SECTION 2

DEFINITIONS

For the purpose of these Rules and Regulations, unless a contrary intention clearly appears, the terms and works defined in Section 81-L of the Subdivision Control Law shall have the meaning given therein. The following other terms and words shall have the following meanings:

- 2.1 **Agent**: Inspector appointed or approved by the Planning Board acting as the agent of the Planning Board.
- 2.2 **Applicant**: Either the owner of the land stated in the application for subdivision or all the owners where title is held jointly, in common, or in tenancy by the entirety, including corporations. An agent, representative, or his assigns may act for an owner, provided written evidence of such fact is submitted. Evidence in the form of a list of their officers and designated authority to sign legal documents shall be required for a corporation.
- 2.3 **Board**: The Planning Board of the Town of Millis.
- 2.4 **Certified by (or Endorsed by) a Planning Board**: As applied to a plan or other instrument required or authorized by the Subdivision Control Law to be recorded, shall mean, bearing a certification or endorsement signed by a majority of the members of a Planning Board, or by its chairman or clerk or any other person authorized by it to certify or endorse its approval or other action and named in a written statement to the Register of Deeds and Recorder of the Land Court, signed by a majority of the Board.
- 2.5 **Definitive Plan**: A definitive plan shall mean a plan of a proposed subdivision or re-subdivision of land drawn in accordance with Section 4.3 of these rules and regulations.
- 2.6 **Engineer**: A person who is permanently registered by the State of Massachusetts or out-of-state registrant who is legally permitted, on a temporary basis, by the State of Massachusetts, to practice professional civil engineering services in the Commonwealth of Massachusetts.
- 2.7 **Lot**: An area of land in one ownership with definite boundaries, used, or available for use, as the site of one or more buildings. Lot area, frontage, depth and width definitions and regulations shall be as defined by the Zoning Bylaw of Millis, Massachusetts.
- 2.8 **Municipal Service**: Public utilities furnished by the town in which a subdivision is located, such as water, sewerage, gas, and electricity.

- 2.9 Preliminary Plan: A preliminary plan shall mean a plan of a proposed subdivision or re-subdivision of land drawn in accordance with Section 4.2 of these rules and regulations.
- 2.10 Recorded: Recorded in the Registry of Deeds of Norfolk County except that, as affecting registered land, is shall mean filed with the Recorder of the Land Court.
- 2.11 "Register of Deeds": The Register of Deeds of Norfolk County and, when appropriate, shall include the Recorder of the Land Court.
- 2.12 Streets: Streets shall mean to include traveled way, curbing, grass strips, sidewalks, drainage, and utilities.
- 2.12.1 Primary Street: A street which receives and distributes traffic from and to various subareas within a given region, and receives traffic from a given residential neighborhood or industrial area and carries it to an arterial highway. These roads run through developed areas or connect concentrations of development, and carry significant volumes of traffic.
- 2.12.2 Secondary Street: A street which primarily provides access to adjacent land uses.
- 2.12.3 Scenic Road (Street): A street defined in Section 15C, Chapter 67, of the General Laws and as amended.
- 2.13 Subdivision: A division of land into two or more lots in such a manner as to constitute "subdivision", as defined in Section 81-L, Chapter 41, of the General Laws and as amended.
- 2.14 Subdivision Types
- 2.14.1 Subdivision Type I: A subdivision for single and two-family residential purposes.
- 2.14.2 Subdivision Type II: A subdivision for apartments, business, or industrial purposes.
- 2.15 Subdivision Control Law: Refers to Sections 81-K to 81-GG, inclusive, of Chapter 41, of the General Laws of the Commonwealth of Massachusetts, entitled "*Subdivision Control*" including all subsequent amendments thereto.
- 2.16 Surveyor: A person who is permanently registered by the State of Massachusetts or out-of-state registrant who is legally permitted to practice land surveying in the Commonwealth of Massachusetts.
- 2.17 These Rules and Regulations: The Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts.

- 2.18 Way: A right-of-way or means of access to a lot. A public way is a way which has been accepted by and the land owned by the Town of Millis or by other means created as a public street. Any other way (private way) is a way over land which is owned by a private party but which is set forth by deed covenant, deed description, or other means as a private way.

SECTION 3

GENERAL

3.1 Plan Believed Not to Require Approval

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 so believes that his plan does not require approval under the Subdivision Control Law, may submit his plan and application Form A to the Planning Board accompanied by the necessary written evidence to show that the plan does not require approval and conforms to the zoning bylaws of the Town of Millis as last amended. Said person shall file, by delivery or registered mail, a notice with the Town Clerk stating the date of submission for such determination, which shall be at least 24 hours before a regularly scheduled meeting of the Planning Board, and accompanied by a copy of said application and the original mylar or other stable base material of the drawing plus five (5) contact prints. The map shall be drawn in black India ink; shall be at a scale of 1" = 40'; and the sheet size shall be either 11" x 16", 18" x 24" or 24" x 36" with a 3/4-inch border on all sides. All zone lines, including watershed protection and flood plain, shall be shown on the plan. The above requirements shall be waived by the Board, if not in agreement with those of the Land Court or Register of Deeds. If notice is given by delivery, the clerk shall, if requested, give a written receipt to the person who delivered such notice. The Form A Application shall include payment of the Planning Board submission fee as noted in the Fee Schedule (Section A of Appendix).

If the Board determines that the plan does require approval under the Subdivision Control Law, it shall within fourteen days of submission of said plan so inform the applicant and return the plan. The Board shall also notify the Town Clerk of its determination.

If the Board fails to act upon the plan within the prescribed fourteen days, it shall be deemed to have determined that approval under the Subdivision Control Law is not required.

3.2 Subdivisions

No person shall make a subdivision within the meaning of the Subdivision Control Law of any land within the Town, or proceed with the improvement or sale of lots in a subdivision, or the construction of ways, or the installation of municipal services therein, unless and until a Definitive Plan of such subdivision has been submitted to and approved by the Planning Board as hereinafter provided.

After approval of the Definitive Plan, the location and width of ways shown thereon shall not be changed unless the plan is amended by resubmission to the Board. The number, shape, and size of the lots shown on the approved Definitive

Plan may, from time to time, be changed without action by the Board, provided every lot so changed conforms to the zoning bylaw of the Town of Millis as last amended and has frontage on a public way. Three (3) copies of such revised plan shall be submitted to the Board for informational purposes.

3.3 Effect of Prior Recording of Subdivision Land

The recording of a plan of land within the Town in the Registry of Deeds of Norfolk County prior to the effective date of the Subdivision Control Law in the Town of Millis showing the division thereof into existing or proposed lots, sites, or other divisions and ways furnishing access thereto, shall not exempt such land from the application and operation of these Rules and Regulations except as specifically exempt by Section 81-FF of the Subdivision Control Law.

3.4 Time for Completion

The construction of all ways and the installation of all required utility services specified in Section 6.0 shall be completed within the time specified by the Board. Failure to do so shall automatically rescind approval under covenant conditions or rescind approval subject to Section 81-W of the Subdivision Control Law for performance secured by bond or deposit of money or negotiable securities. The Board may, at its discretion, grant a time extension to the applicant.

3.5 Limitation of One-Dwelling on Any Lot

Not more than one building designed or available for use for dwelling purpose shall be erected or placed or converted to use as such on any lot in a subdivision, or elsewhere in the Town of Millis without the consent of the Board. Such consent may be conditional upon the providing of adequate ways furnishing access to each site for such building, in the same manner as otherwise required for lots within a subdivision.

3.6 Lots

All lots within the subdivision shall comply with the area, frontage, depth and width requirements of the Zoning Bylaw for the Town of Millis, Massachusetts, in force at the time of subdivision application.

SECTION 4

PROCEDURES FOR THE SUBMISSION AND APPROVAL OF PLANS

4.1 Pre-Preliminary Plan

- 4.1.1 **General:** A pre-preliminary or sketch plan of a subdivision may be submitted by the applicant to the Planning Board for informal discussion with the Board prior to submission of a Preliminary and/or Definitive Plan. The submission may be in sketch form as determined by the applicant.

4.2 Preliminary Plan

- 4.2.1 **General:** A Preliminary Plan of a subdivision may be submitted by the applicant to the Board of Health and to the Board for discussion and approval by the Board. The submission of such a Preliminary Plan will enable the subdivider, The Board, other municipal agencies and owners of property abutting the subdivision to discuss and clarify the problem of such subdivision before a Definitive Plan is prepared. Therefore, it is strongly recommended that a Preliminary Plan be filed in every case. A properly executed application Form B (see Forms) shall be filed with the Preliminary Plan submitted to the Board.

- 4.2.2 **Submittal Requirements:** The Preliminary Plan, along with a properly executed Form B, shall be submitted by delivery to the Town Clerk at least seven (7) days before a regularly scheduled monthly meeting of the Board or by registered or certified mail to the Board, in care of the Town Clerk, again at least seven (7) days before a regularly scheduled meeting of the Board. If so mailed, the date of mailing shall be the date of submission of the plan. In addition, written notice of such submission using Form B shall be given by the Applicant to the Town Clerk by delivery or registered or certified mail. The Town Clerk shall give a written receipt, if requested, by the person who delivered such notice. The following shall be submitted by the Applicant:

- a. Eight (8) contact prints, dark line on white background, containing the information required in Section 4.2.3 filed with the Board.
- b. One (1) contact print, as in "a." above, filed with the Board of Health. The applicant shall obtain a receipt from the Board of Health.

- c. Where any contiguous unsubdivided land is owned or controlled by the owner or applicant, a sketch plan shall be submitted showing the proposed subdivision parcel and streets, the boundaries of the contiguous unsubdivided land and a possible or prospective street layout.
- d. The Form B Application shall include payment of the Planning Board submission fee as noted in the Fee Schedule (Section A of Appendix).
- e. A completed "Environmental Assessment of Subdivision Plan" (see Form N).

4.2.3 Contents: The Preliminary Plan shall be drawn on tracing paper 24 inches by 36 inches with pencil at a scale of 1" = 40' and shall show sufficient information, as listed below, about the subdivision to form a clear basis for review and discussion and for the preparation of the Definitive Plan.

- a. Subdivision name, boundaries, all zone lines, including watershed protection and flood plain, true north point or magnetic north and present degrees of declination, date of submission, required scale and title "Preliminary Plan".
- b. Names of record owner and applicant.
- c. Name of the designer, engineer or surveyor who prepared said plan.
- d. Names and plan location of all abutters indicating limits of contiguous boundaries and those owners of land separated from the subdivision only by a street.

The following information shall be shown in a preliminary (general) manner:

- e. Existing and proposed lines of streets, ways, rights-of-way, easements, including purpose and any public or common areas within the subdivision.
- f. Proposed system of drainage, including the location of natural waterways, indicating direction of flow, and all waterbodies or areas classified as wetlands adjacent to or within the proposed subdivision.
- g. Proposed sanitary sewer system and water distribution system, where applicable.

- h. Approximate boundary lines of proposed lots, with approximate dimensions and areas.
- i. Location, names, and present widths of streets bounding, approaching, or within reasonable proximity of the subdivision.
- j. Topography of the land at five (5) foot contour intervals.
- k. Key plan at a scale of 1" = 500' included in the lower left corner of the Preliminary Plan indicating the location of the subdivision within the Town and the location of the proposed streets. This key plan may also be shown on a separate sheet.
 - 1. When multiple sheets are necessary, match lines shall be used and referenced, and an index plan, graphically indicating the arrangement of said multiple sheets, shall be submitted on one standard (24" x 36") sheet at a scale of 1" = 500'.

During discussion of the Preliminary Plan, the complete information required by the Definitive Plan, Section 4.3, and the financial arrangements, Section 4.9.1, will be developed.

- 1. The 100-Year Base Flood Line Elevation.

4.2.4 Action by Board: The Board may give such Preliminary Plan its approval, with or without modification. Such approval does not constitute approval of a subdivision but does facilitate the procedure in securing approval of the Definitive Plan.

The Board may also disapprove the plan. A disapproval will be accompanied by a detailed statement of reasons for the action.

Notice of its action must be given by the Board to the applicant and the Town Clerk within 60 days of the date of submission. Failure to act within that time shall be considered as approval of the Preliminary Plan.

4.3 Definitive Plan

4.3.1 General: A Definitive Plan shall be governed by the Subdivision Regulations in effect at the time of submission of such plan or in effect at the time of the submission of such plan or in effect at the time of the submission of a Preliminary Plan provided that a Definitive Plan evolved therefrom shall have been submitted to the Planning Board within seven (7) months from the date of submission of the Preliminary Plan.

A Definitive Plan shall be governed by the zoning in effect at the time of submission of such plan or a Preliminary Plan from which a Definitive Plan is evolved in accordance with the provision of Section 7A of Chapter 40A of the General Laws of the Commonwealth.

4.3.2 Submittal Requirements: The Definitive Plan, along with a properly executed Form C, shall be submitted by delivery to the Town Clerk at least seven (7) days before a regularly scheduled monthly meeting of the Board or by registered or certified mail to the Board, in care of the Town Clerk, again at least seven (7) days before a regularly scheduled meeting of the Board. If so mailed, the date of mailing shall be the date of submission of the plan. In addition, written notice of such submission using Form C shall be given by the Applicant to the Town Clerk by delivery or registered or certified mail. The Town Clerk shall give a written receipt, if requested, by the person who delivered such notice. The following shall be submitted by the Applicant:

- a. An original drawing of the Definitive Plan and eight (8) contact prints thereof, dark line on white background containing the information required in Section 4.3.3 shall be filed with the Board. The original drawing will be returned after approval or disapproval.
- b. Two (2) contact prints, as in "a." above, filed with the Board of Health. The applicant shall obtain a receipt from the Board of Health.
- c. A sketch plan showing a possible or prospective street layout for any contiguous unsubdivided land owned or controlled by the owner or applicant unless such a plan has already been submitted to the Board under the provisions of Section 4.2.2.
- d. The Form C Application shall include payment of the Planning Board submission fee as noted in the Fee Schedule (Section A of Appendix).
- e. List of Abutters (Form D). Name and mailing address of all the abutters as they appear in the most recent tax list, including owners of land separated from the subdivision only by a street. The applicant shall obtain a certificate of the Board of Assessors that all abutters are listed.
- f. Evidence that, when applicable, the Definitive Plan conforms to the approved Preliminary Plan or that the Definitive Plan includes the modifications required by the Board's action on the Preliminary Plan.

- g. A completed "Environmental Assessment of Subdivision Plan" (Form N), if not already submitted with Preliminary Plan.
- h. Estimated quantities of material by item in sufficient detail for the town to estimate the amount of any construction bond or other performance guarantee.

4.3.3 Contents: The Definitive Plan shall be clearly and legibly drawn in black India ink upon mylar or a similar stable base material. The plan shall be at a scale of 1" = 40' or such other scale as the Board may accept to show details clearly and adequately. Sheet sizes shall be 24 inches by 36 inches with a 1-inch boarder on all sides. The Definitive Plan shall contain the following information:

- a. Subdivision name, boundaries, all zone lines, including watershed protection and flood plain, true north point or magnetic north and present degrees of declination, date of submission, and scales.
- b. Names of record owner and applicant.
- c. Name of the engineer and surveyor who prepared the plan with respective certificates and seals. Certification by the surveyor that all surveying conforms to the Technical Standards for Property Surveys of the American Congress on Surveying and Mapping shall appear on the plan, and all photogrammetric map work shall conform to National Geological Survey Mapping Standards of the American Society of Photogrammetry.
- d. Names and plan location of all abutters indicating limits of contiguous boundaries and those owners of land separated from the subdivision only by a street. This must agree with Form D.
- e. Existing and proposed lines of streets, lots, ways, rights-of-way, easements, and any public or common areas within the subdivision. (The proposed names of proposed streets shall be shown in pencil until they have been approved by the Board.) Purpose of easement shall be indicated.
- f. Sufficient data, including lengths, bearings, radii, tangent distances, and central angles to determine the exact location, direction, and length of every street and way line, lot line, and boundary line, and to establish these lines on the ground.
- g. Boundary lines, areas in square feet, and dimensions of all proposed lots, with all lots designated numerically and in sequence.

- h. Location, names, and present widths of streets bounding, approaching, or within reasonable proximity of the subdivision.
- i. Major site features, such as existing stone walls, fences, buildings, large trees, rock ridges, and out-croppings, historic features, wooded areas, natural waterways indicating direct of flow, and all waterbodies or areas classified as wetlands.
- j. A Location Plan at a scale of 1" = 500' included in the lower left-hand corner of the Definitive Plan showing the right-of-way lines of all proposed streets in the subdivision and their location relative to two or more existing streets, or portions thereof, shown and readily identifiable as to locus on the Town Map and to such accuracy that the Town Map may be placed over the location plan for purposes of actual transfer to the Town Map. This Location Plan may also be shown on a separate sheet.
- k. Location of all permanent monuments identified as to whether existing or proposed.
- l. Suitable space to record the action of the Board and the signatures of the members of the Planning Board on each sheet of the Definitive Plan. Where the applicant elects to secure completion of required improvements by covenant (rather than bonds or surety), there shall be a notation above such space as follows:

"Approved _____, subject to covenant conditions set forth in a covenant executed by _____, dated _____, and recorded - Norfolk County Registry of Deeds, Book No. _____, Page No. _____."

Items m, n, o, p, q, r, and s shall be submitted on combined or separate sheets as is necessary to clearly show the required information to the satisfaction of the Board. The Plans shall be at a scale of 1" = 40' or such other scale as the Board may accept to show details clearly and adequately. Sheet size shall be 24 inches by 36 inches with a 1-inch boarder on all sides.

- m. Existing and proposed topography, with 2-foot contour intervals, unless the Board agrees that the natural surface of the ground may be adequately represented by contours with larger intervals or by figures of elevation.

(The existing and proposed topographical information presented shall be sufficient to define the grading of each proposed lot and street.)

- n. Existing and proposed profiles of the centerline of proposed streets of a horizontal scale of 1" = 40' and a vertical scale of 1" = 4' U.S.C. and G.S. datum (mean seal level) if such reference datum has been established within 1/4 of a mile of the subdivision. If such datum is not available, an appropriate datum shall be used and a permanent bench mark established within the subdivision with adequate description. Profiles shall also indicate the location of any intersecting public or private ways, and the location and size of existing and proposed storm drains, water mains, and sewers and their appurtenances, and other underground utilities to be placed in the right-of-way. The stationed centerline corresponding to the profile upon which the above profiles are taken shall be shown in plan view.
- o. Proposed layout of storm drainage, water supply and sewage disposal systems. The design computations for determining the required sizes of the storm drainage and sewer system shall be submitted with the said proposed utility layout and shall be in accordance with any master plan adopted by the Millis Department of Public Works.
- p. Location and dimensions of each proposed on-lot sewerage and water system. Computations used in determining required on-lot sewerage leaching areas.

Where sewage disposal is to be by individual on-lot sewage disposal system, the result of percolation tests and the level of the water table for each lot proposed within the subdivision shall be presented. Ground water determination should be made during the period of the year when the ground water table is at its highest elevation. Percolation tests shall not be in frozen ground. The tests shall be executed at the applicant's expense in accordance with the regulations of the Town of Millis Board of Health. The agent of the Board of Health shall be present during all tests.

*See insert at end of document

- q. When multiple sheets are necessary, match lines shall be used and referenced, and a Sheet Layout Plan, graphically indicating the arrangement of said multiple sheets, shall be submitted at a suitable scale.
- r. A Site Plan showing layout of the entire subdivision, including street names, lot numbers and areas at a scale suitable to the Board.
- s. Any other pertinent information, unique to the particular subdivision, which the Board shall request.

- t. The 100-Year Base Flood Line Elevation.

4.4 Suitability of the Land

- 4.4.1 Review by Board of Health: At the time of filing of the Definitive Plan, the applicant shall file, in accordance with Section 4.3.2.b. with the Board of Health, two contact prints of the Definitive Plan, dark line on white background, including all items of the Contents of Definitive Plan described above.

The Board of Health shall review the plans and report to the Planning Board as provided in the General Laws of the Commonwealth of Massachusetts, Chapter 41, Section 81U as amended.

- 4.4.2 Wetlands Protection: Wherever alteration of wetlands, as defined in Chapter 131 of the Massachusetts General laws, is required by the plan, information describing this activity and its effect on the natural resources shall be submitted to the Board with the Definitive Plan.

Board approval of the Definitive Plan shall not, however, constitute approval of alteration of wetlands required under Chapter 131 of the Massachusetts General Laws.

- 4.5 Review by Town Agencies: The Board shall request, before a Public Hearing, using Form E, that the appropriate Town departments and commissions review and comment on the design of their respective services. Where a bond is to be filed, cost estimates of the required work shall be prepared by the various Town departments and commissions.

- 4.6 Public Hearing: Before approval, modification and approval, or disapproval of a Definitive Plan is given, a public hearing shall be held by the Board. Notice of the time and place of the hearing, and of the subject matter, sufficient for identification, shall be given by the Board at the expense of the applicant by advertisement in an official publication or newspaper of general circulation in the Town of Millis in each of two successive weeks, the first publication being not less than 14 days before the day of such hearing. A copy of said notice shall be sent by registered or certified mail to the applicant and to all owners of land abutting upon the subdivision or separated from such land only by a street as appearing in the most recent tax list (Form D).

- 4.7 Approval, Modification and Approval, or Disapproval: The Board shall take action on the Definitive Plan after the required hearing, but within the time period specified in the Subdivision Control Law from the date of submission of the Definitive Plan. The Board may approve, modify and approve, or disapprove said plan as provided by statute. The action of the Board, in respect to such plan, shall be by vote, copies of which shall be certified and filed with the Town Clerk and sent by delivery, registered or certified mail, postage prepaid to the applicant

Table 1
Geometric Design Standards

Item	Type I Secondary Street	Type II Secondary Street	Types I and II Primary Street
R.O.W. Width (ft.)	50	60	60
Pavement Width (ft.)	26	32	36
Horizontal Alignment Min. Radius at Centerline (ft.)	300	350	350
Vertical Alignment Stopping Sight Distance	200	250	250
<u>Grade - percent</u>			
a. Maximum	10.0	6.0	6.0
b. Minimum	1.0	1.0	1.0
<u>Intersection</u>			
a. Min. Angle (deg.)	75	75	75
b. Min. Offset (ft.)	150	150	200
c. Min. Radius @ roadway edge ¹	25	50	50
d. Min. Sight Dist. (ft.)	200	250	250
<u>Dead End Streets</u>			
a. Maximum length (ft.)	500	500	Not permitted
b. Min. Turnaround Radius @ roadway edge (ft.)	50	50	Not permitted
c. Min. Turnaround Radius @ property line (ft.)	60	60	Not permitted

¹ Where angle of intersection varies more than 10 degrees from a right angle, the radius at the edge of roadway may be reduced as approved by the board, in which case the opposite radius must be correspondingly greater.

at his address stated on the application (Form F). Favorable action shall require a majority of the Board members.

If the Board modifies or disapproves such plan, it shall state with its vote and reasons for its action. Final approval, if granted, shall be endorsed on the reproducible drawings of the Definitive Plan by the signatures of the majority of the Board but not until the statutory 20-day appeal period has elapsed following the filing of the certificate of the action of the Board with the Town Clerk and said Clerk has notified the Board that no appeal has been filed, or if appeal has been taken not until the entry of a final decree of the court sustaining the approval of such plan. After the Definitive Plan has been approved and endorsed, the applicant shall furnish the Board, the Agent, Board of Public Works, Board of Selectmen, and the Assessors with one print each.

Final approval of the Definitive Plan does not constitute the laying out or acceptance by the Town of streets within a subdivision which action is reserved by statute to the Town Meeting.

- 4.8 Recording of Plan: Within ten days after the Definitive Plan, as approved and endorsed, has been recorded at the Norfolk County Registry of Deeds and, in the case of registered land with the recorder of the Land Court, the applicant shall notify the Board in writing of the date and file number, as appropriate, of such recording.

At the time of recording, all proposed public easements and lands to be dedicated to public or common ownership or use shall be located and described and copies thereof sent to the Board.

Upon receipt of notification of recording and receipt of copy of plan from the applicant to the Building Inspector and the Board, the Board shall file one print of the Definitive Plan with the Building Inspector. Unless the Building Inspector has received such print, he shall issue no permit for a building on any lot within the subdivision. Further, in accordance with the statute, where approval with covenant is noted thereon, they shall issue no permit for the construction of a building on any lot within the subdivision except upon receipt from the Board of a copy of the Certificate of Performance (Form M) releasing the lot in question.

4.9 Performance

- 4.9.1 Performance Guarantee: Before endorsement of the Board's approval of a Definitive Plan of a subdivision, the applicant shall agree to complete the required improvements specified in Section 6.0 for all lots in the subdivision, such construction and installation to be secured in accordance with Section 81U of the Subdivision Control Law by one, or in part by one and in part by the other, of the following methods, which, from time to time, be varied by the applicant.

- a. Approval with Bonds or Surety: Before approval of the Definitive Plan of a subdivision, the applicant shall either file a surety company performance bond (Form H) or provide a deposit of money or negotiable securities (Form G) in an amount determined by the Board, which may consult with the appropriate Town departments (see Form E), to be sufficient to cover the costs of all or any part of the improvements specified in Section 6.0 not covered by a covenant under "b." below. Such bond or security, if filed or deposited, shall be approved as to form and manner of execution by the Board and as to acceptability of the sureties by the Board and shall be contingent on the completion of such improvements. The Board may require that the time be specified within which such construction and installation shall be *completed* as a condition for approval. At the discretion of the Board, a time extension may be granted.
- b. Approval with Covenant (Form I): Instead of filing a bond or depositing surety, the applicant may request approval of his Definitive Plan on condition that no lot in the subdivision shall be sold and no buildings shall be erected thereon until the improvements specified in Section 6.0 are constructed and installed so as to serve the lots adequately. The Board may give approval with the condition that the applicant will *complete all* roads and services within the time period the Board specified or else the applicant's approval will be automatically rescinded.

Such conditions shall be contained in a separate agreement (Form I) and shall be referred to on the plan and recorded in the Registry of Deeds. When the applicant has completed the required improvements specified in Section 6.0 for any lots in a subdivision, he may request a release for said lots. The Board shall then submit to the Agent and each involved department or commission of the Town Form J, which shall be completed and returned by said Agent, department, and commission. When Form J has been received indicating satisfactory performance, the Board shall then execute and deliver to the applicant such Release, which shall be in form for recording in the Registry of Deeds (Form M). Thereafter the Conditions relating to such lots and so released shall terminate.

- 4.9.2 Reduction of Bond of Surety: The penal sum of any such bond, or the amount of any deposit held under clause "a." of Section 4.9.1. above, *may*, from time to time, be reduced by the Board and the obligations of the parties thereto released by said Board in whole or part. If release is by reason of covenant, a new plan of the portion to be subject to the covenant shall be required.

- 4.9.3 Alternate Method of Guaranteeing Performance: Following the recording of a mortgage or mortgages on a lot or lots in the subdivision given as security for advances to the subdivider by a lender, the Board may, at its option, release lots from the operation of a performance guarantee without receipt of a bond or deposit of money upon delivery to the Board of an agreement with the Board, which agreement shall be executed by the applicant and the lender of sufficient funds otherwise due the applicant to secure the construction of ways and the installation of utilities. Said agreement shall provide for a schedule of 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 by the applicant, any funds remaining undisbursed shall be available for completion.
- 4.9.4 Inspection of Construction Performance: At the appropriate stages of construction of the improvements specified in Section 6.0, the applicant shall submit to the Agent a Request for Inspection of Construction Form K specifying that improvement to be inspected and shall notify the Board of his completion of improvements required under Section 6.0.
- 4.9.5 Release of Performance Guarantee: Upon the completion of improvements required under Section 6.0, security for the performance of which was given by bond, deposit, or covenant, or upon the performance of any covenant with respect to any lot, the applicant shall send by registered or certified mail to the Town Clerk and to the Board a written statement in duplicate that the said construction or installation in connection with which such bond, deposit, or covenant has been given has been completed in accordance with the requirements contained under Section 6.0, such statement to contain the address of the applicant. If the Board determines that said construction or installation has not been completed, it shall specify in writing to the applicant and to the Town Clerk in a notice sent by registered or certified mail the details wherein said construction and installation fails to comply with the requirements contained under Section 6.0. Upon failure of the Board to act on such application within 45 days after the receipt of the application by the Town Clerk, all obligations under the bond shall cease and terminate by operation of law, and any deposit shall be returned and any such covenant shall become void. In the event that said 45-day period expires without such specification, or without the release and return of the bond or return of the deposit or release of the covenant as aforesaid, the Town Clerk shall issue a certificate to such effect, duly acknowledge, which may be recorded.
- 4.9.6 Evidence of Satisfactory Performance: Before the Board will release the interest of the Town in a performance bond or deposit or, in the case of approval with covenant, issue a release of covenant:

- a. The applicant shall file with the Board a certified copy of the layout plan with accompanying profiles for each street in the subdivision. Certification shall be by the engineer and surveyor employed by the applicant at his own expense, and shall indicate that all streets, sidewalks, sewers, storm drains, and water mains, and their appurtenances have been constructed in accordance with the lines and grades of said plan and are accurately located as shown thereon. The applicant shall also file a street acceptance plan or plans, as the case may be, suitable for recording in a form acceptable to the Board and showing such data and boundaries, including all proposed easements and public lands, as is necessary for the Town to properly accept the street or streets shown thereon.
- b. The applicant shall petition the Board of Selectmen in the manner prescribed by the Board of Selectmen to insert an application for acceptance of the streets within his subdivision in the Warrant for Annual Town Meeting.
- c. The Board shall then notify the various involved Town agencies using Form J and shall obtain in writing, using Form J, from these agencies a statement that all work required by These Rules and Regulations has been inspected by them and completed in the subdivision and that they have approved the methods of construction and materials used in the performance of such work.
- d. The Board shall obtain in writing (Form J), from the Board of Health, as statement that each already installed on-lot sewerage system was installed in accordance with the Millis Board of Health's Rules and Regulations and Article XI of the Sanitary Code of the Department of Health of the Commonwealth of Massachusetts.
- e. The applicant may be required to execute an instrument, in a form approved by the Board, transferring to the Town or to an approved public utility company, without cost, valid unencumbered title to all sanitary sewers, water mains, and appurtenances thereto, and other utilities constructed and installed in the subdivision or approved portion thereof, and conveying to the Town or to an approved public utility company without cost and free of all liens and encumbrances, perpetual rights and easements to construct, inspect, repair, renew, replace, operate and forever maintain such storm drains, water mains, and other utilities, with any manholes, conduits, and other appurtenances, and to do all acts incidental thereto, in, through, and under the whole of all streets in the subdivision or approved portion thereof, and if any such sewers or water mains have been constructed and installed in land not within

such streets, then in, through, and under a strip of land extending twelve and one half (12-1/2) feet in width on each side of the centerline of all such drains and water mains. The Board may require greater than twelve and one half (12-1/2) feet in width on each side of the centerline where it deems necessary.

SECTION 5

DESIGN AND CONSTRUCTION STANDARDS

The term "Standard Specifications" shall mean the Commonwealth of Massachusetts, Department of Public Works Standard Specifications for Highways, Bridges, and Waterways, 1967 Edition including all amendments.

5.1 Streets

5.1.1 Location

- a. All streets in the subdivision shall be designed so that, in the opinion of the Board, they will provide safe vehicular travel. Due consideration shall also be given by the subdivider to the attractiveness of the street layout in order to obtain maximum livability and amenity of the subdivision.
- b. The proposed streets shall conform to Master or Study Plan as adopted in whole or in part by the Board.
- c. Provision satisfactory to the Board shall be made for the proper projection of streets, or for access to adjoining property which is not yet subdivided.
- d. Reserve strips prohibiting access to streets or adjoining property shall not be permitted, except where, in the opinion of the Board, such strips shall be in the public interest.

5.1.2 Cross Sections: Cross sections shall be in accordance with the standards as shown on Figures 1A, 1B, 1C, 2 and 3. The Board shall have the right to determine whether the street is a Primary Street or a Secondary Street.

5.1.3 Alignment, Grade, Dead-End, and Intersections: These shall be in accordance with the standards shown on Table 1.

5.1.4 Site and Earthwork

- a. All materials and construction methods used for roadway excavation and embankments shall conform to Section 100 of the Standard Specifications.

- b. All natural features, such as large trees, watercourses, scenic points, historic plots and similar community assets shall be preserved. It is the opinion of the Board that this protection and preservation will add to the attractiveness and value of the subdivision.
- c. The applicant shall employ, at his own expense, an engineer or surveyor to set all lines and grades in a manner satisfactory to the Agent.
- d. The entire area within the right-of-way lines shall be cleared and grubbed of all stumps, brush, roots, and like material. All rock or masonry with a maximum dimension over three inches and within six inches of the top of subgrade shall be removed. Trees intended to be preserved shall be protected by suitable boxes, fenders, or wells as appropriate.
- e. All topsoil, defined as fertile, friable, natural material, which has demonstrated vegetative growth, shall be removed within the right-of-way, for use within the site.
- f. In cut areas, all unsuitable material, such as peat, and highly organic silt or clay or any other material that, in the opinion of the Agent is considered to be detrimental to the subgrade, shall be removed and replaced with Ordinary Borrow conforming to M1.03.0 of the Standard Specifications. Type a shall be used within twelve inches of the top of subgrade and Type b above, placed in 12-inch loose lifts and compacted to 95 percent of maximum density as determined by ASTM designation 1557-70 Method D.
- g. In fill areas, the embankment shall be Ordinary Borrow specified and placed as in (f.) above.
- h. The subgrade shall be shaped to a true surface conforming to the lines and grades indicated on the approved definitive plan (cross section and profile) and where original ground, shall be compacted to 95 percent, as defined in (f.) above, to a depth of six inches. A tolerance of 1/2 inch above or below finished subgrade will be permitted provided this difference is not maintained over fifty feet and the required crown (cross slope) is maintained.

5.1.5 Pavement Structure

- a. The pavement structure shall be constructed in accordance with applicable sections of Section 400 of the Standard Specifications.

- b. The gravel base course shall be gravel borrow (M.1.03.0 Type b) in accordance with Section 405 of the Standard Specifications.
- c. The binder course shall be asphalt concrete in accordance with Section 460, Class I Bituminous Concrete Pavement Type I-1 (Binder Course Mix) of the Standard Specifications.
- d. The surface course shall be asphalt concrete in accordance with Section 460, Class I Bituminous Concrete Pavement Type I-1 (Top Course Mix) of the Standard Specifications.
- *e. see insert at end of document

5.2 Shoulders: Shoulders shall not be allowed in place of sidewalks, curbs, and grass strips shown on Figures 1A, 1B, and 1C, unless permission is specifically granted by the Board.

5.3 Curbing: Bituminous concrete curb shall conform to the material and construction methods as specified in Section 470 of the Standard Specifications and as indicated on Figures 1A, 1B, and 1C. It shall be installed along both edges of all roadways (except at driveways). The full arc length of curves at intersections shall, however, consist of granite curbs, the materials and construction methods of which shall be in accordance with Section 500 of the Standard Specifications. *5.3.1., etc. see insert at end of doc.

5.4 Sidewalks

5.4.1 Bituminous concrete Sidewalks shall conform to the material and construction methods as specified in Section 701 of the Standard Specifications and as indicated in Figures 1A, 1B, and 1C.

5.4.2 Sidewalks shall be constructed on both sides of the roadway, as indicated on Figures 1A, 1B, and 1C, unless, in the opinion of the Board, they are not warranted. Then the Board may waive the sidewalk requirement or require that they be constructed on only one side of the roadway. When sidewalks are deleted, grass strips shall be extended in their place.

5.4.3 Bituminous concrete sidewalks shall:

- a. Be laid in 2 courses of 1-1/2 inches each to a depth of 3 inches after rolling.
- b. Conform to the material requirements of M3.11.00 of the Standard Specifications for Class I Bituminous Concrete Pavement.
- c. Be placed on an 8-inch gravel base, except at driveways where it shall be 12 inches, compacted to 95 percent (ASTM Designation 1557-70 Method D) conforming to M1.03.0 Type C of the Standard Specifications.

5.4.4 Cement concrete sidewalks shall be required in intensively used areas producing a high volume of pedestrian traffic and in Type II Subdivisions. The Board may require that the sidewalks be constructed for the total width from the curb line to the R.O.W. line if, in the opinion of the Board, it is warranted by the character of the area and pedestrian use.

5.4.5 Cement concrete sidewalks shall:

- a. have a finished thickness of 4 inches, except at driveways where it shall be 6 inches.
- b. be an air-entraining Portland cement mix producing from 6 to 8 percent air and developing a minimum 28-day compressive strength of 2,500 psi.
- c. be placed on an 8-inch gravel base compacted to 95 percent (ASTM Designation 1557-70 Method D) conforming to M1.03.0 Type C of the Standard Specifications.
- d. be placed in alternate slabs of 30 feet in length, which shall be separated by a 1/2" transverse expansion joint conforming to M9.14.0 of the Standard Specifications.
- e. be uniformly scored into block units of not more than 36 sq. ft. to a depth of at least 1 inch.
- f. shall be reinforced with 6/6 x 10/10 welded steel wire fabric conforming to ASTM Designation A185-70.

*5.4.6 See insert at end of document

5.5 Grass Strips

5.5.1 Grass strips shall be provided on each side of the roadway, as indicated on Figures 1A and 1B, between the curb and the sidewalk, where sidewalks are required.

5.5.2 The finished grade of such grass strips shall have a slope of 1/2"/ft. toward the roadway. Where unusual physical land characteristics or topographic conditions exist, the Board may approve the construction of a grass strip of a greater slope with the finished slope not projecting above a plane sloped four horizontal to one vertical upward from the back of the curb or below a plane sloped four horizontal to one vertical downward from the back of the curb.

5.5.3 Shade Trees, not less than twelve (12) feet in height and of a species approved by the Agent shall be planted on each side of every street in the subdivision wherever, in the opinion of the Agent, existing woodlands or

suitable individual trees are not retained. Trees shall be located outside the exterior street lines and at such distance therefrom and at such spacing as the Tree Warden shall specify in accordance with the most recent general practice of the Town in planting trees on private property along public ways. In no case shall such trees be spaced less than 100 feet apart on centers.

- 5.5.4 The top six inches of grass strips shall consist of good quality loam extending to the right-of-way, screened, raked, and rolled with at least a 100-pound roller to grade. The loam shall be seeded with lawn grass seed applied in sufficient quantity to assure adequate coverage and rolled when the loam is moist. Loaming and seeding shall be in accordance with Section 751 and 765 of the Standard Specifications.

5.6 Side Slopes

- 5.6.1 The area in back of the required grass strip, where no sidewalk is constructed, or in back of the sidewalk where sidewalks are constructed shall be graded to a point where it coincides with the finished grade of abutting lots in such a manner that no portion thereof will project above a plane sloped four horizontal to one vertical. Drainage shall be toward the roadway where possible.

- 5.6.2 Loaming and seeding shall conform to Section 5.5.4.

- 5.7 Street Name Signs: Street name signs shall be the Standard Millis street name signs provided at the applicant's expense. Signs showing names of both intersecting streets shall be erected by the applicant at each street intersection near the inside curb edge. The type and location of street name signs shall be subject to the approval of the Agent.

5.8 Monuments and Markers

- 5.8.1 Granite or reinforced-concrete monuments 4 feet in length dressed to 6 inches at the top with a 3/8-inch drill hole in the center, and not less than 6 inches square at the bottom shall be set flush to finish grade as shown on plans.
- 5.8.2 No permanent monuments shall be installed until all construction which could destroy or disturb the monuments is completed.
- 5.8.3 Monuments shall be installed at all street intersections, at all points of change in direction, or curvature of streets, and at other points as shown in the Definitive Plan and where, in the opinion of the Board, permanent monuments are necessary.

*
*see insert at
end of document

5.9 Bridges: Bridges shall be designed in accordance with the Standards of the Massachusetts Department of Public Works.

*
*see insert
at end of document

5.10 Street Lighting: Street lighting shall be installed along all streets. Light standards to be used shall be subject to the approval of the Planning Board.

5.11 Fire Alarm and Police Call Boxes: Fire alarm and/or police call boxes shall be provided, if required by the Board acting for the appropriate department. The box(es) shall be placed, installed, and wired as specified by and under the direct supervision of the Town of Millis Fire and/or Police Department(s), as appropriate. This shall be done at the expense of the applicant, who shall make all necessary arrangements for this installation with the appropriate department(s).

5.12 Utility Installation: All public utilities and municipal services, including but not limited to water, sanitary sewerage, drainage, fire alarm, electricity, gas, and telephone, shall be installed underground with service to the individual buildings also underground. Utility poles, fire alarm boxes and water hydrants and poles will be permitted above ground but no wiring or piping. The installation of public utilities and municipal services shall conform to the standards of the following sections.

5.12.1 General

- a. The applicant shall employ, at his own expense, an engineer to set all lines and grades in a manner satisfactory to the Board.
- b. All utility lines shall be installed in the location indicated and with the minimum cover, as shown in Figures 1A, 1B, and 1C.
- c. The extent of trench open at any one time shall be subject to the requirements of the Agent.
- d. The width of trench shall be made as narrow as practicable and within 12 inches from the top of pipe or conduit shall not exceed 4/3 diameter of the pipe or conduit plus 18 inches.
- e. Sheeting, if used, shall be cut off 12 inches above top of pipe or conduit.
- f. For installation in embankments, the embankment shall be constructed in accordance with Section 5.1.4f. to at least 1 foot above the top of the pipe or conduit and then the pipe or conduit installed as in undisturbed material.
- g. Unsuitable material in trenches shall be removed and replaced in accordance with Section 5.1.4.e.

- h. All utilities shall be tested and approved prior to installation of base course(s) and pavement.
- i. All lot connections shall be installed to the right-of-way line, marked or surveyed so as to be easily located in the future.
- j. Back fill shall be placed in 12-inch loose lifts and compacted to 95 percent in accordance with ASTM Designation 1557-70 Method D.

*k. see insert

5.12.2 Drainage: A Stormwater Management Plan shall be designed by a Registered Professional Engineer for a subdivision or project to the satisfaction of the Planning Board and the Board of Health. The requirements for Stormwater Management are intended to protect the public and environment by providing adequate protection against flooding, siltation, pollutants, and other drainage problems. The system may make use of gutters, inlets, culverts, catch basins, manholes, subsurface piping, surface channels, natural waterways, detention basins and/or detention basin/recharge systems. Use of retention basins that rely entirely on infiltration will not be permitted except in combination with detention facilities. The Board will not approve any design or component which, in its opinion, does not meet the standards of engineering practice, will not function without frequent maintenance, or is unsuited to the character of the subdivision.

When the project causes a requirement for stormwater improvements off-site, the applicant shall be required to secure the necessary approvals and provide such improvements in the public interest.

The stormwater management design shall include a control strategy and plan for Source Control and Best Management Practice (BMP) for any particular development or project and shall accomplish the following goals:

- a. Reproduce, as nearly as possible, the hydrological conditions in the ground and surface waters prior to development.
- b. Reduce storm water pollution to the "Maximum Extent Possible" (MEP), using Best Management Practices (BMP's).
- c. Minimize future operation and maintenance requirements, the performance of which shall be the obligation of future individual lot owners, as required by subsection 5.12.2.1.f. of these regulations.
- d. Have a neutral effect on the natural and human environment.
- e. Be appropriate for the site given physical restraints.

- f. Provide a sufficient level of health and environmental protection during the construction phase.

5.12.2.1 Stormwater Management Plan: An acceptable stormwater management plan shall:

- a. Capture and treat the "First Flush" of a storm , usually the runoff from the first 2 inches of precipitation for a small land area or other value as may be designated by the Board.
- b. Not cause an increase in either the total volume of runoff discharged offsite, as compared with the respective discharge offsite prior to development, and not cause a decrease in total volume or rate of discharge offsite in instances where said discharge is related to the protection of a water supply, wetlands, waterbody, or other public health, safety or environmental values. Such condition shall be required for storms of 1, 10, 50 and 100 year frequency events. Calculations shall be performed using the most recent procedures of the U.S.D.A. Soil Conservation Service.
- c. Include design of BMP's and infiltration and/or detention structures in accordance with procedures acceptable to the Board such as are described in the following publications:
 - 1. "Controlling Urban Runoff - A Practical Manual for Planning and Designing Urban BMP's, Department of Environmental Programs, Metropolitan Washington Council of Governments"
 - 2. "Storm Water Detention for Drainage, Water Quality, and CSO Management", Peter Stahre and Ben Urbonas, Prentice Hall, 1990
 - 3. ASCE Publications entitled "Design of Urban Quality Controls", 1988, and Urban Runoff Quality - Impact and Quality Enhancement Technology", 1986
 - 4. "Urban Surface Water Management", Stuart G. Walesh, John Wiley & Sons, Inc., 1989

5. "Underground Disposal of Storm Water Runoff - Design Guidelines Manual", February 1980, Federal Highway Administration, Department of Transportation"
 6. "Erosion and Sediment Control in Site Development - Massachusetts Conservation Guide - Volume 1"
- d. In cases where runoff infiltration cannot, in the opinion of the Board, be appropriately implemented because of the possibility of contamination of water supply or because of extremely poor infiltrative and permeability characteristics of the soil, the requirements regarding volume may be waived by the Board, provided the applicant provides such additional measures to prevent any increase in elevation or duration of downstream flood elevations.

Such additional measures may be, but are not restricted to, the construction of compensatory flood storage facilities and/or the creation of additional wetlands and/or floodplain.

Poor infiltrative and permeability conditions are defined as a soil permeability of less than 1×10^{-4} centimeters per second. Unless, in the opinion of the Board, such testing is not applicable for a particular site, all permeability tests shall be insitu field bore hole tests for permeability in the acceptable range as specified above.

If permeability testing is desired to be performed in soils of lesser permeability, laboratory tests for hydraulic conductivity shall be performed on undisturbed samples by the Falling Head Permeability Test using flexible membrane triaxial test cells with back pressure (Army Corps of Engineers Manual EM 1110-2-1906 Appendix VII).

- e. An Operation and Maintenance Plan shall be prepared as part of the design of the detention basin/recharge system. The plan shall include the types of maintenance normally required and the frequency of necessary inspections and maintenance activities. Sediment monitoring and removal shall be part of the maintenance plan. The plan shall be submitted to the Board for approval, and shall be included on and referenced in the definitive plan and recorded at the Registry of Deeds or Land Court, whichever is appropriate. If the complete plan is too lengthy to include on the

definitive plan, the applicant shall submit the plan as a separate document and that document shall be referenced and incorporated in the definitive plan and in the Planning Board's written decision on that definitive plan and recorded with that plan and decision at the Registry of Deeds or Land Court, whichever is appropriate.

- f. An enforceable covenant, running with the land, to the benefit of the Town, shall be imposed on every lot within the subdivision, which covenant shall obligate each lot owner for a pro-rated share of the detention basin/ recharge system(s) and any appurtenances thereto. Said covenant shall include a provision for its extension pursuant to Massachusetts General Law, Chapter 184, Section 27 as may be amended from time to time. The operation and maintenance requirements of the basin as described above shall be incorporated in this covenant. Said covenant shall be in a form acceptable to Town Counsel.

For larger subdivisions, or those with numerous or complex drainage facilities, the Planning Board may require that a lot-owner trust or association be created to operate, maintain and repair the drainage and detention basin/recharge systems and any appurtenances thereto. The trustees of the trust or association shall be authorized and required to assess and collect charges for that operation, maintenance and repair from the beneficiaries of the trust or members of the association. The owners of record of lots within the subdivision shall be the beneficiary of the trust or members of the association. The Town shall be a third-party beneficiary of the trust or association with the right, but not the duty, to enforce the obligations of the trust, association and trustees. The requirements of this section shall be included on and referenced in the deed of each lot of the subdivision and on the definitive subdivision plan and recorded at the Registry of Deeds or Land Court, whichever is appropriate. Said declaration of trust shall be in a form acceptable to Town Counsel.

- g. The Stormwater Management Plan shall include a complete drain system designed for each street in the subdivision. It shall be of sufficient size to permit unimpeded flow of all natural waterways, to provide adequate drainage of all portions of the street system so that water does not accumulate thereon, to intercept storm water from adjacent lots of the subdivision and to eliminate ponding of storm runoff except in designated areas.

The roadway drainage system shall be designed to intercept and carry the ten (10) year peak rate of discharge as determined using the Rational Method. The proper drain size may be calculated by using "Manning's Formula". Drain pipes shall be large enough to flow full during the design storm without surcharge.

For storm events greater than the 10-year storm, swales and/or ditches with easements shall be provided to control flooding and to direct runoff to appropriate locations. At depressions in the road where ponded water can only be removed through the roadway drainage system, the inlet and outlet capacity of the system shall be increased to handle the 100-year storm runoff to the depressed area.

The design analysis shall follow the procedures outlined in the Massachusetts D.P.W. Highway Design Manual Sections 10.2.2.2 Rational Method and 10.3 Hydraulic Design.

- h. Culverts and open channels shall be designed on the basis of a one-hundred (100)-year storm using the SCS method. Culverts and open channels shall be designed using a two (2) foot freeboard allowance. Unsubmerged culverts and open channels shall be designed using "Manning's Formula". Open channels shall be designed at subcritical flow with a minimum slope of 0.005 ft./ft. Submerged culverts shall be designed by use of Hydraulic Engineering Circular (HEC) No. 5 and/or No. 10. Minimum culvert sizes shall be 15-inch diameter for driveways and 18-inch diameter for roadway cross culverts.
- i. Lots shall be graded in such a manner that development of one lot shall not have a detrimental effect on the subdivision drainage nor detrimental drainage on another, if provision is necessary to carry drainage to or across a lot, an easement of adequate width shall be provided.

5.12.2.2 Drainage Design

- a. Drainage Analysis: The Stormwater management analysis shall include at least the following information: watershed area calculations, coefficient of runoff calculations, determination of time of concentration, rainfall intensity, calculation of design discharge, selection of Manning's coefficient of roughness, slope of pipe or channel, capacity and velocity of pipe or channel flowing full, velocity of

flow for design discharge, inverts and rim elevations, hydraulic gradeline calculations, and submit a copy of the drain profile sheets with the hydraulic gradeline drawn in red pencil. The SCS method analysis should also include a soil map for the site, and determination of the curve number for each watershed area. The analysis should also describe all assumptions and provide a copy of all charts and nomographs used by the designer. Each design shall be accompanied by a suitable topographic plan of the site and sufficient surrounding areas to show complete drainage patterns that will affect the site and abutting properties. This plan may, in many cases, be a modified site plan but, to avoid confusion, should be submitted as a separate sheet and labeled "Watershed Plan". The plan shall show existing and proposed topography and shall clearly indicate: the contributory areas to each collection structure and catchment area, the route of overland flow, and the slope used to determine the time of concentration. Each area is to be labeled with the same designations on the plan as described in the calculation sheets.

- b. Drainage Structures: Catch basins and manhole structures shall be reinforced precast concrete or precast concrete masonry blocks with minimum 4-foot inside diameter. Manhole covers and catch basin grates shall be cast iron, conforming to patterns LK110 and LF248-2 as manufactured by the El. L. Lebaron Foundry, or equivalent, and shall be machined to fit their frames securely and evenly. Manhole cover shall have a 3-inch lettering to read "DRAIN". The top precast section or rows of block shall be set at an elevation that will allow for installation of a minimum of two (2) courses and a maximum of five (5) courses of brick and mortar for setting the cast-iron frame and cover or grate.

All construction shall conform to these rules and regulations and to applicable details of the Commonwealth of Massachusetts DPW Standard Specifications for Highway and Bridges, latest edition. Cases not specifically covered by this section shall be in accordance with good engineering practice.

1. Materials: Materials shall conform to the following requirements:

- (a) Precast reinforced concrete units shall conform to ASTM C478 and shall be of the sizes indicated on

the referenced detail or shown on the definitive plan.

- (b) Precast concrete masonry blocks shall conform to ASTM C139 and shall be of proper radius.
- (c) Brick shall be new, whole clay brick or equal, conforming to ASTM C32 Grade MS.
- (d) Concrete for paved inverts and similar uses shall be 3,000 psi concrete.
- (e) Mortar for use in setting brick and joining precast sections shall be composed of one part portland cement (ASTM C-150) to two parts sand (ASTM C-144) with 20 percent hydrated lime (ASTM C207).

Structures shall be inspected by the Planning Board Agent prior to backfilling. This requirement shall be included on the definitive plan and in the applicant's contract with the construction contractor.

2. Catch Basins: Catch basins with three (3) foot sumps shall be located on both sides of the roadway, at all low points in the roadway, uphill of an intersection with the center line of the basin located three (3) feet before the point of curvature of the curb rounding of the intersection, at intervals of not more than three hundred (300) feet, and closer as necessary so that the capacity of the gutter and grate will not cause flooding above 0.2 feet in the gutter line for the design storm. Additionally, the subdivision drainage system shall be extended into any existing up-hill intersecting street, with a catch basin installed at the upstream side of the existing street. In no instance shall catch basins be located along a driveway cut. All catch basins shall be provided with a cast iron grate and vertical granite curb inlet. The grate and curb inlet shall be positioned on the structure in a manner that will not obstruct the grate and gutter mouth openings.
3. Manholes: All catch basins shall be connected to the drainage system through manholes. Manholes shall be required at every change in direction, slope or diameter of pipe size. The maximum distance between manholes shall not exceed 300 feet.

Manhole sizes shall be greater than 4 feet in diameter for pipe sizes larger than 30 inches, and as needed for structural integrity for multiple pipe entrances at close angles and elevations.

All manholes shall be constructed with shaped concrete or brick inverts and shall be provided with cast aluminum or equivalent steps 12 inches apart incorporated in the construction.

All drop manholes or inlets with a drop of six feet or more shall be provided with a splash pad.

c. Detention Basins and Detention Basin with Recharge Systems: Detention basins and detention basin/recharge systems must meet the following performance standards:

1. All components and materials of a basin shall be located outside of wetlands. The components and materials of a basin may be constructed or located in a wetland providing that the applicant receives a final Order of Conditions under the Wetlands Protection Act, Massachusetts General Law, Chapter 131, Section 40, from the Conservation Commission or the Massachusetts Department of Environmental Protection, and any other approval or permit required under federal, state or local law.
2. The proposed basin shall be located entirely on private property and to the maximum extent possible on one lot.
3. A 50-foot buffer zone of existing vegetation shall be retained between all basin or siltation structures and adjacent uses or scenic corridors, surface water and wetlands subject to Massachusetts General Law, Chapter 130, and Chapter 131, and/or local wetland bylaws.

However, the provisions of this section shall not prohibit the selective clearing of trees and shrubs, the establishment of new vegetation better suited to the proposed considerations, or the discharge of stormwater across such buffer areas, provided that these activities are authorized by the Conservation Commission or Massachusetts Department of Environmental Protection under a final Order of Conditions pursuant to

Massachusetts General Law Chapter 131, Section 40.

Newly constructed drainage areas shall be designed to be as maintenance free and aesthetically pleasing as is practicable. If, in the judgment of the Board, the buffer zone will not provide an adequate aesthetic barrier to the detention area, a landscaping plan shall be included on and referenced in the definitive subdivision plan and recorded at the Registry of Deeds or Land Court, whichever is appropriate.

4. The construction of the basin shall precede all other construction, excepting that clearing which is necessary for access to the basin. This condition shall be included on and referenced in the definitive subdivision plan and recorded at the Registry of Deeds or Land Court, whichever is appropriate.
5. The design of the detention basin shall, at a minimum, meet the following standards:
 - (a) Side slopes of detention basins should be no steeper than 4:1 horizontal to vertical relationship unless steeper slopes can be shown to be typical for conditions on the site.
 - (b) 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.
 - (c) A 3-foot-wide riprap channel, with minimum slope of 1/2 percent (0.5%), shall be constructed from the inlet of the basin to the outlet structure. A minimum two percent slope shall be permitted for the bottom of the basin between the toe of the dike and the riprap channel. Spot grades shall be shown to demonstrate the required grading.
 - (d) The outlet structure shall be as maintenance free as possible and designed to prevent debris from clogging the pipe. Details of the outlet structure shall be shown on the plans.
 - (e) An emergency spillway shall be provided to allow release of runoff for the storm frequency greater than the 100-year storm. Spillway details shall be

shown on the plans.

- (f) Where clearing and/or regrading of the site may be unavoidable for installation of the basin and necessary structures, vegetation shall be re-established in conformance with the proposed landscape plan.
- (g) The prohibition of undesirable or unnatural accumulation of water shall refer to stagnant, ponded waters, but not to wet systems, which are designed to have continuous stream flow through the basin.

d. Drain Pipe:

1. Drain pipes shall be a minimum of Class III reinforced concrete. In general, they should be designed to flow full with the hydraulic grade line (HGL) at the crown. The minimum pipe diameter shall be 12 inches and shall have a minimum grade of 0.4 percent; larger pipes shall be governed by the minimum velocity. The minimum velocity at design flow should be three (3) feet per second and the maximum twelve (12) feet per second, unless otherwise approved by the Board. All lateral drain pipe between catch basins and manholes shall have a minimum 2.5 feet of cover over the top of the pipe. All main line drain pipes between manholes shall have a minimum 4.5 feet of cover. Also, it is required that the Hydraulic Grade Line of the storm drain not rise to a level that would flood any subdrain outfalling into the storm drain system.
2. At structures where the outlet pipe is larger than the inlet pipe, the crown of the outlet pipe shall be at the same elevation or lower than the crown of the inlet pipe.

- e. Sub-Surface Drains or Sub-Drains: In areas where the finished grade of the roadway is less than four feet above the watertable or in areas where less than four feet of fill is placed above water in swampy places or any standing water, or in other areas, where, in the opinion of the Board, the sub-grade must be drained, a system of sub-drains shall be designed for such areas. In addition, laterals may be required as directed by the Board in areas in which an undue amount of water could accumulate in the

sub-grade. The system of sub-drains shall be discharged into the storm drainage system or otherwise disposed of in a manner satisfactory to the Board.

f. Outfalls:

1. All drain outfalls shall be extended to, and be compatible with, either a natural waterway or an existing drainage system. Exposed ends of all storm drainage pipes shall be provided with Flared-end sections or headwalls, appropriate energy dissipators and security bars. The ground elevation of all outfall pipes, swales, channels or drainage ditches discharging to retention basin, detention basin or to a stream, brook, pond, marsh or other wetland, shall be at or above the ten (10)-year flood elevation to allow free discharge from the outfall structure.
2. Connection to an existing drainage system will require that the applicant prove that the existing drainage system is adequate to handle the increased flow from the subdivision. In the absence of an existing drainage facility, 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 the subdivision. Provisions shall be made for the disposal of the drainage in such manner that no flow is conducted over Town ways, or over the land of others unless a drain easement is obtained. The definitive plans will include the plan view and profile of the existing system that the new subdivision will tie into.
3. Where adjacent property is not subdivided, provisions shall be made for extensions of the system by continuing appropriate drains to the boundary of the subdivision at such size and grade as will allow their proper connections to appropriate down gradient drainage systems.
4. Culverts shall have a headwall at each end and any culvert over thirty-six (36) inches in diameter shall include, at the upstream end, additional protection as approved by the Board for the roadway side slopes.
5. No drainage outfall shall discharge below the highwater line of a swamp, stream, or body of water as defined in

6. At the connection of the new drain to an existing Town drain, the applicant shall coordinate an inspection with the Millis Department of Public Works and the Planning Board Agent.

- g. Security Bars: Security bars in the form of grates shall be provided at all accessible openings to open pipe drains. At outfalls of 12" diameter pipes, a single bar grate which passes through the center of the opening is sufficient. At outfalls of 15" diameter pipes, a two-bar grate which divides the opening into thirds is sufficient. At all other locations, including upstream openings of all pipes, grates are required as follows:

The grate shall be constructed of steel bars not less than 1/2" diameter, welded together to provide a grate not smaller than the pipe opening. The vertical bars shall be placed with 4" clear openings between them, and the horizontal bars shall be placed 6" on center. The grate shall be installed at the face of the headwall or flared-end sections in such a manner as to allow removal for maintenance purposes. A suitable sketch of the grate and method of installation shall be submitted for approval with the plans for the drains and appurtenances.

- h. Headwalls: Field stone masonry or stone-veneered reinforced concrete headwalls shall be provided at both ends of culverts and the discharge end of storm drains.
- i. Scour Protection:

1. Description: The discharge end of all storm lines shall be protected with a riprap apron. The top of said riprap apron shall be installed so as to coincide in elevation exactly with the elevation of the bottom of the pipe and the ground line. The design, construction and materials of the riprap apron shall be shown in plan and cross-section views on the definitive subdivision plan and recorded in the Registry of Deeds or Land Court, whichever is appropriate.

At straight headwalls, the width of the apron shall equal the length of the headwall. At headwalls with wingwalls, the width of the apron shall equal the width of the opening between the wingwalls. At flared end

units the width of the apron shall equal the nominal pipe diameter plus 6'. The length of the apron shall be equal to 10 times the nominal diameter of the drain pipe at all outfall structures except the flared end units, where the riprap shall also be placed on the embankment to a point 1' above the top of the outfall pipe. The riprap apron shall be composed of a layer of stone 12" or more in thickness, placed upon a gravel filter layer 6" in thickness, unless in the opinion of the Board or the Board's Engineer, the quality of the existing subgrade is of a gradation equivalent to the filter layer material specified.

The stone used for riprap shall consist of a protective covering of angular shaped stones laid on the slopes in front of and around drainage ends to ensure protection of the headwall or flared end unit, the embankment and the downstream channel.

In areas where riprap must be placed on slopes equal to or greater than 5%, the stone shall be grouted and shall be extended in a channel to a point where the slope of the land is less than 5%, at which point an additional 10' length of unmortared riprap shall be placed.

2. Materials: Stone for riprap shall consist of sound, durable angular boulders, quarry stone or rock fragments. Rounded stones, boulders, sandstone or similar stone or relatively thin slabs will not be acceptable. Stone shall be free of overburden, spoil, shale, and organic material and shall meet the following gradation requirements:

<u>Size of Stone:</u> <u>Weight (lb.)</u>	<u>Maximum Percent of Total</u> <u>Weight Smaller than Given Size</u>
150	100
100	80
50	25
25	10

No more than 5% of weight shall pass a 2" sieve. Each load of riprap shall be reasonably well-graded from the smallest to the maximum size specified. Control of gradation shall be visual inspection.

Gravel for the filter layer shall conform to the requirements of road gravel.

Mortar for grouted riprap shall conform to Section M4.02.15 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, 1973.

3. Construction Methods: Prior to placement of the riprap, all unsuitable material such as topsoil, vegetation, roots, sand, etc. shall be removed from the area to be protected by riprap. The area shall be filled to the subgrade of the riprap with material hereinbefore specified for the filter layer and compacted as for roadway embankments. All slopes adjacent to the headwall or the flared end unit shall be graded to a slope not to exceed two (2) horizontal to one (1) vertical. The slope immediately downstream of the outfall structure shall be graded generally in the shape of a trapezoidal channel, flaring to a flat cross section at the terminus of the riprap apron.

Stone for riprap shall be placed on the filter layer or, when the filter layer is not required, directly on the prepared slope or area in a manner which will produce a reasonable well-graded mass of stone with the minimum practicable percentage of voids. The entire mass of stone shall be placed in conformance with the lines, grades, and thickness in one operation and in such a manner as to avoid displacing the underlying material. Placing riprap by methods likely to cause segregation, will not be permitted.

The larger stones shall be well distributed and the entire mass of stone shall conform approximately to the gradation specified. The riprap shall be so placed and distributed that there will be no large accumulations of either the larger or smaller sizes of stone. All voids, measuring four inches or larger in any dimension, shall be filled with stone (chinked) to the satisfaction of the Planning Board or its Agent.

It is the intent of these specifications to produce a fairly compact riprap protection in which all sizes of material are placed in their proper proportions. Hand placing chinking, or re-arranging of individual stones or existing stone, may be required to the extent necessary

to secure the results specified.

The stone for grouted riprap shall conform to the gradation requirements for riprap as hereinbefore specified. The stone shall be clean and free of fines which prevent penetration of grout. Care shall be taken in placing the stone to keep earth or sand from filling the spaces between the stones. The stones shall be placed on a prepared slope and shall be thoroughly moistened. Any excess of fines shall be sluiced to the underside of the stone blanket before grouting. The grout shall be delivered to the site by means that will insure uniformity and prevent segregation of the grout. Penetration of the grout shall be to the full depth of the riprap apron and the grout shall fill the interstices to within one (1) inch of the surface.

5.12.2.3 Drain Pipe Construction:

- a. Excavation: The trench for the pipe shall be excavated to the required line and grade including earth, boulder and ledge. Trenches for storm drains shall be no wider than the outside diameter of the pipe plus 24 inches. This trench width shall apply from the top of the pipe to the bottom of the trench. Above the top of the pipe, the trench may be as wide as necessary to properly install the pipe. Trenches with side slopes steeper than the natural angle or repose of the soil shall be sheeted in an approved manner, as necessary, to avoid cave-ins and sloughing. All excavations shall be properly barricaded and lighted at night where they are close to pedestrian or vehicular traffic. Before any pipe is placed in a proposed constructed fill area, the contractor shall place and thoroughly compact the fill material to a minimum two feet above the top grade of the proposed pipe, after which the pipe trench may be excavated. If any cross pipes, conduits, drains or other unforeseen obstacles are encountered in the excavation which cannot be relocated, the drain shall be redesigned to avoid the obstruction in a manner suitable to the Planning Board or its Agent. The applicant shall not construct or implement the redesigned pipe unless and until the Planning Board or its Agent authorizes that redesign in writing. Possible obstructions to the line shall be investigated prior to the construction of the drain in its immediate vicinity.

- b. Bedding: Drainage pipe shall be bedded in compacted screened gravel to a depth of 6 inches below the bottom of the pipe in suitable earthen material and 12 inches in rock. Where unsuitable foundation material is encountered, the Agent shall be notified. The applicant shall remove the material to the limits specified by the Agent and shall replace such unsuitable material with thoroughly compacted gravel, as directed. Gravel bedding shall be carried to the spring line of the pipe. Selected material containing no large boulders shall then be hand-placed to an elevation of 1 foot above the top of the pipe and compacted in Section 5.12.1.j. Mechanical equipment shall be used to backfill the trench above this point.
- c. Pipe Laying: Pipe shall be laid starting with the downstream end. A laser beam or other approved devices shall be provided to insure that the pipe is laid true to line and grade. Reference bench marks shall be clearly marked to enable the inspector to quickly check the grade and invert elevations. The joints of all pipes shall be filled with mortar composed of one part Portland cement to three parts clean sharp sand. Lime may be added up to 25 percent of the cement and enough water to make a workable mix. The downstream pipe shall be laid with groove or bell and facing upstream in the proper position, and a dab of mortar shall be placed in the bell or groove. The spigot or tongue end shall be placed in the bell or groove, such that the inverts match, and the peripheral space shall be filled with stiff mortar. All mortar squeezed out on the inside of the pipe shall be removed before it sets.
- d. Backfilling: After the pipe has been laid and inspected, the trench shall be backfilled. The space under the pipe haunches shall be carefully filled with selected material, free from stones or frozen earth, and compacted carefully to prevent the pipe from moving. The layer of backfill up to 12 inches over the top of the pipe shall also be of selected material free from stones and frozen earth, well compacted. The remainder of the trench shall be backfilled in 12 inch layers, except as noted below. Under roads or other traffic areas, the trench shall be backfilled in 6 inch layers with each layer compacted to the density of the surrounding soil. Pavement and base course materials removed during the excavation process shall be replaced with pavement and base course to match those removed. When, in the opinion of the Planning Board or its Agent,

the excavation is deep enough to warrant it, temporary pavement shall be provided as directed. Trenches not in pavement shall be left in a mounded condition as directed by the Planning Board or its Agent.

5.12.3 Water (*See insert at end of document)

- a. Water mains appurtenances, including service connections, shall be installed in conformity with the specifications of the Millis Department of Public Works.
- b. Water pipe diameter shall not be less than 8 inches unless a smaller diameter is approved by the Department of Public Works.
- c. Public water mains shall be cement-lined cast iron or ductile iron, suitable for 150 psi working pressure for laying condition B with 5.0 feet of cover.
- d. Hydrants shall be located at each street intersection and not more than 500 feet apart. Each hydrant shall be served directly from the water main.
- e. At water main intersections, all lines will be valved and the maximum spacing between valves on any one main shall be 800 feet, so mains may be isolated for maintenance purposes.
- f. All pipelines shall be given combined pressure and leakage tests at the direction of the Board of Public Works. The average leakage shall not exceed a rate of 10 gallons per inch of diameter per 24 hours per mile of pipeline. All potable water lines shall be disinfected according to AWWA Designation C601-68.
- g. Where a public water system is located within 400 feet of the subdivision, the subdivider shall connect to the public water system. Where the public water system is not located within 400 feet of the subdivision, the subdivider may install a private on-lot water system for each lot.

5.12.4 Sanitary

- a. If a public sewerage system exists within 400 feet of the subdivision, the applicant shall install, at his cost, in the street and to every lot, lateral sewers for connection to the public sewerage system. In order for the applicant to design and properly install such laterals, the Town shall be responsible for providing the applicant, at the applicant's expense, with any existing plan, specifications, and design standards of the public sewerage system.

b. If public sewerage connections are not required according to section a. above, then the applicant shall install private on-lot sewerage systems, according to item c. below.

c. Private on-lot sewerage systems shall be designed and constructed in accordance with the requirements of the Board of Health of the Town of Millis and Article XI of the Sanitary Code of the Massachusetts Department of Public Health. A permit shall *not* be issued for any individual disposal system from any building or buildings having a design sewage flow in excess of 2,000 gallons per day without prior approval by the Massachusetts Department of Public Health in accordance with Section 17, Chapter 111, of the General Laws.

5.12.5 Other Utilities Other utilities, where necessary, shall be located as indicated on Figures 1A, 1B, and 1C. Materials and construction methods shall be in accordance with the requirements of the involved public utility company and appropriate Town Department.

5.13 Easements: Easements for utilities across lots or centered on rear or side lot lines shall be provided where necessary and shall be at least 15 feet wide for electricity and telephone and 25 feet for drainage, sewerage, and water. The Board may increase or reduce the width requirements as deemed appropriate.

Where a subdivision is traversed by a watercourse, drainage way, channel or stream, the Board shall require that there be provided stormwater easements or drainage rights-of-way of adequate width to conform substantially to the lines of such watercourse, drainage way, channel or stream, and to provide for maintenance or other necessary purpose.

No easement shall be permitted across land of others, unless an agreement in proper form is obtained permitting such an easement.

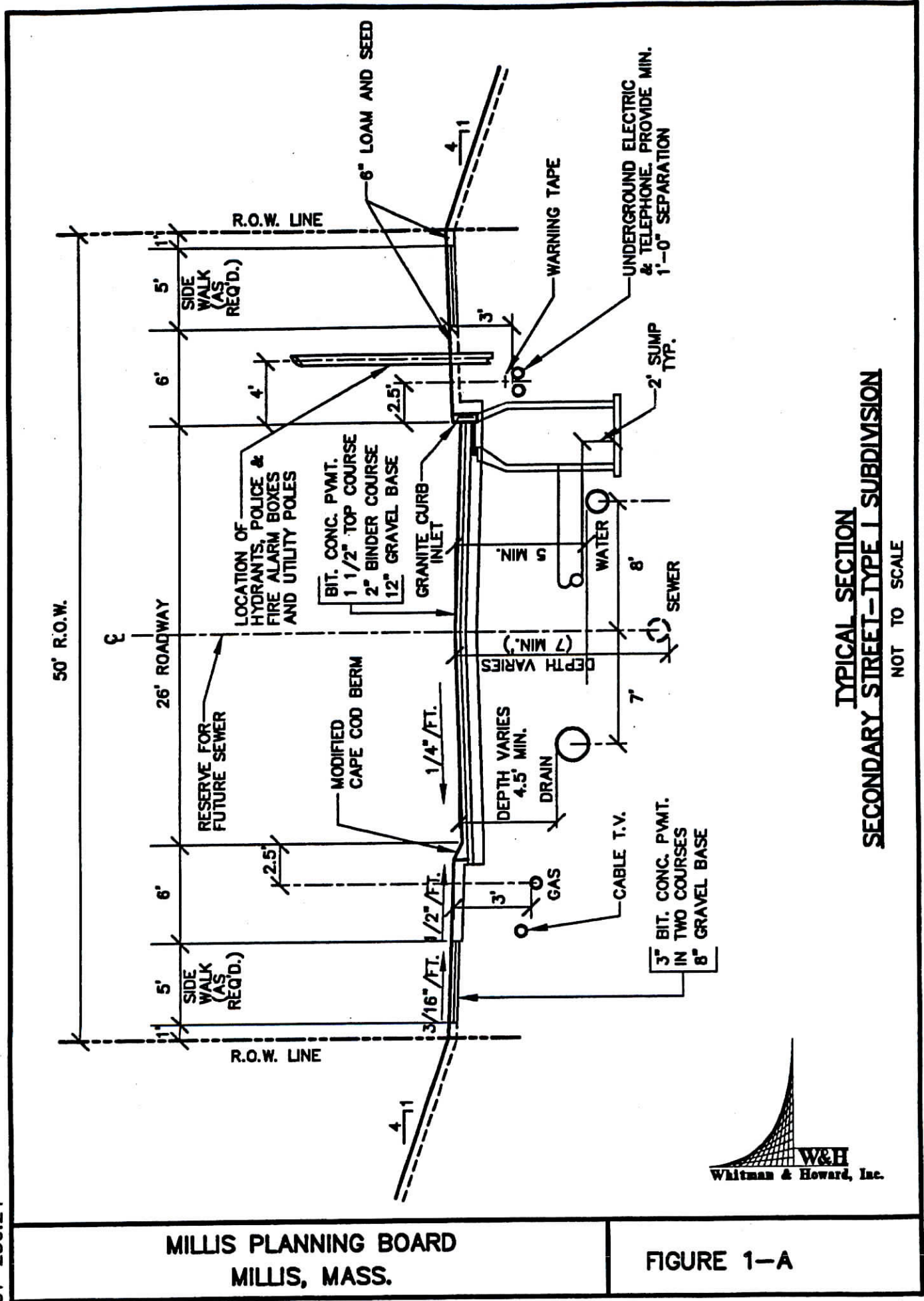
5.14 Retaining Walls: Retaining walls shall be designed in accordance with the Standards of the Massachusetts Department of Public Works. Retaining walls may not be used as part of the road structure.

5.15 Fencing: Fencing shall be required in subdivisions abutting limited or controlled access highways or expressways, or other limited or controlled access roads. Fencing may be required in other areas where physical features require such safety and shall be approved by the Agent.

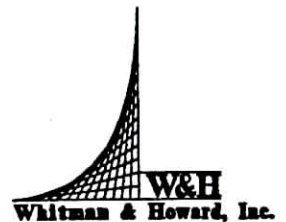
5.16 Guard Rails: Guard rails shall be provided at points of hazard along the roadway such as fixed objects at the pavement edge, high fills, fills on sharp curvature, along water courses, steep cliffs, along deep ditches in cuts and similar locations as required by the Agent. Type and installation of guard rails shall be approved by the Agent.

- 5.17 Open Spaces: Before approval of a plan, the Board may also require the plan to show a park or parks suitably located for playground or recreating purposes or for providing light and air. The park or parks shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of such land. The Board may be appropriate endorsement of the plan, require that no building be erected upon such park or parks for a period of not more than three years without its approval.
- 5.18 As-Built Plans: As-built plans showing the location, grades, and other significant information regarding utilities and roads shall be prepared by the applicant and turned over to the Agent in conjunction with the Request for Release of Performance Guarantee provided for in Section 4.9.5. This may be done by submitting revised Mylars of the original submittal showing the actual existing as-built conditions.
- 5.19 Cleaning Up: The entire area must be cleaned up so as to leave a neat and orderly appearance free from debris and other objectionable materials. All catch basins shall be properly cleaned out.
- 5.20 Street Maintenance: Applicant is responsible for snow and ice removal and street maintenance within a subdivision until the top course is applied to the roadway.

As a condition of approval, the applicant will place on deposit, with the Town, sufficient funds to cover the cost of street maintenance during the period from the application of the top course to acceptance of the road as a public way by Town Meeting.

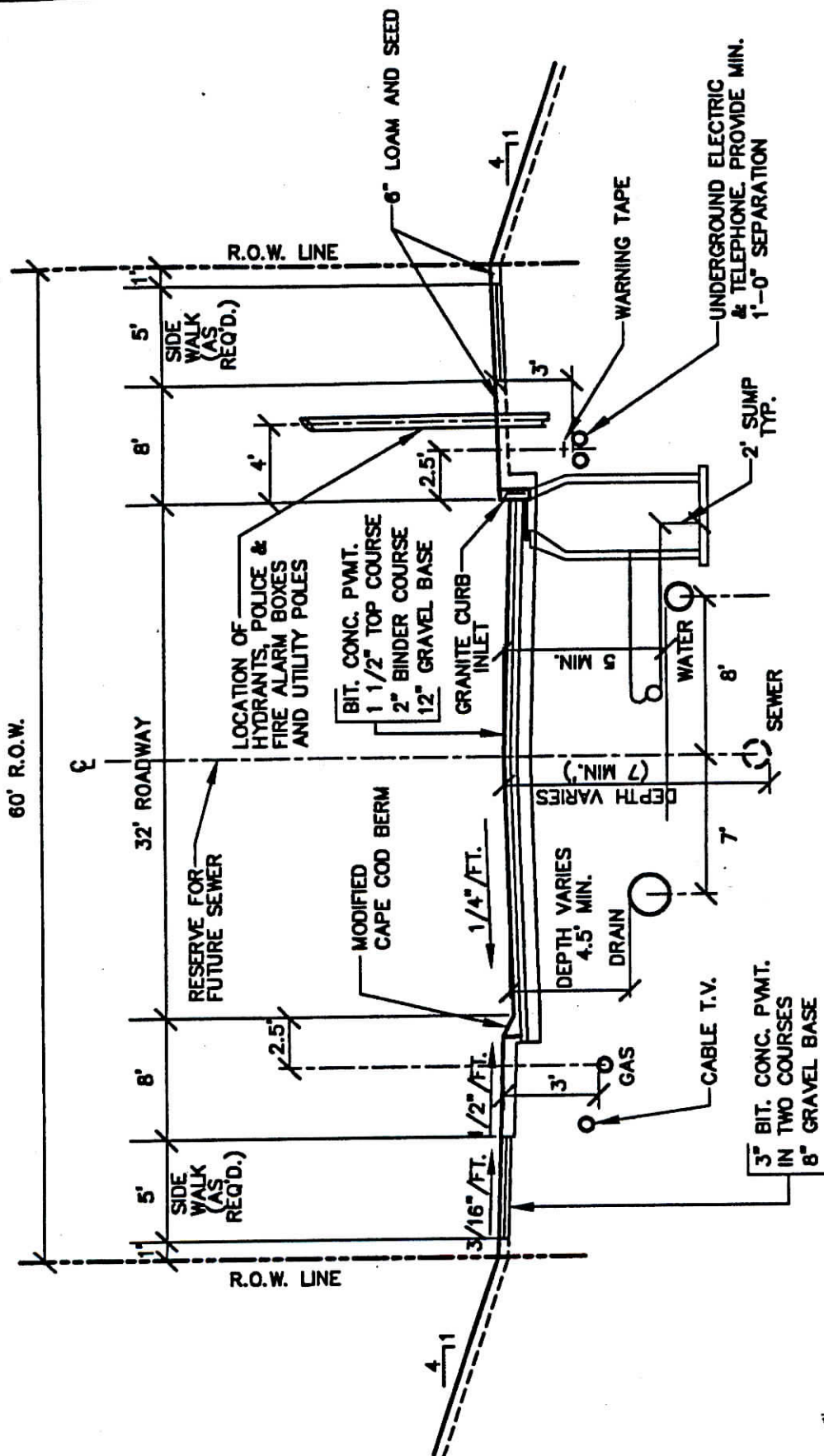


TYPICAL SECTION
SECONDARY STREET-TYPE I SUBDIVISION
 NOT TO SCALE

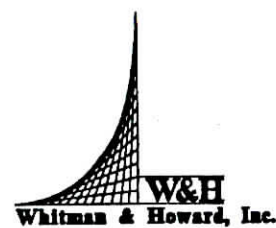


MILLIS PLANNING BOARD
 MILLIS, MASS.

FIGURE 1-A



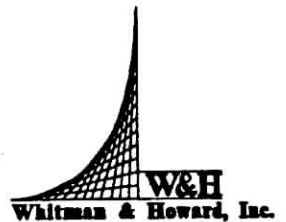
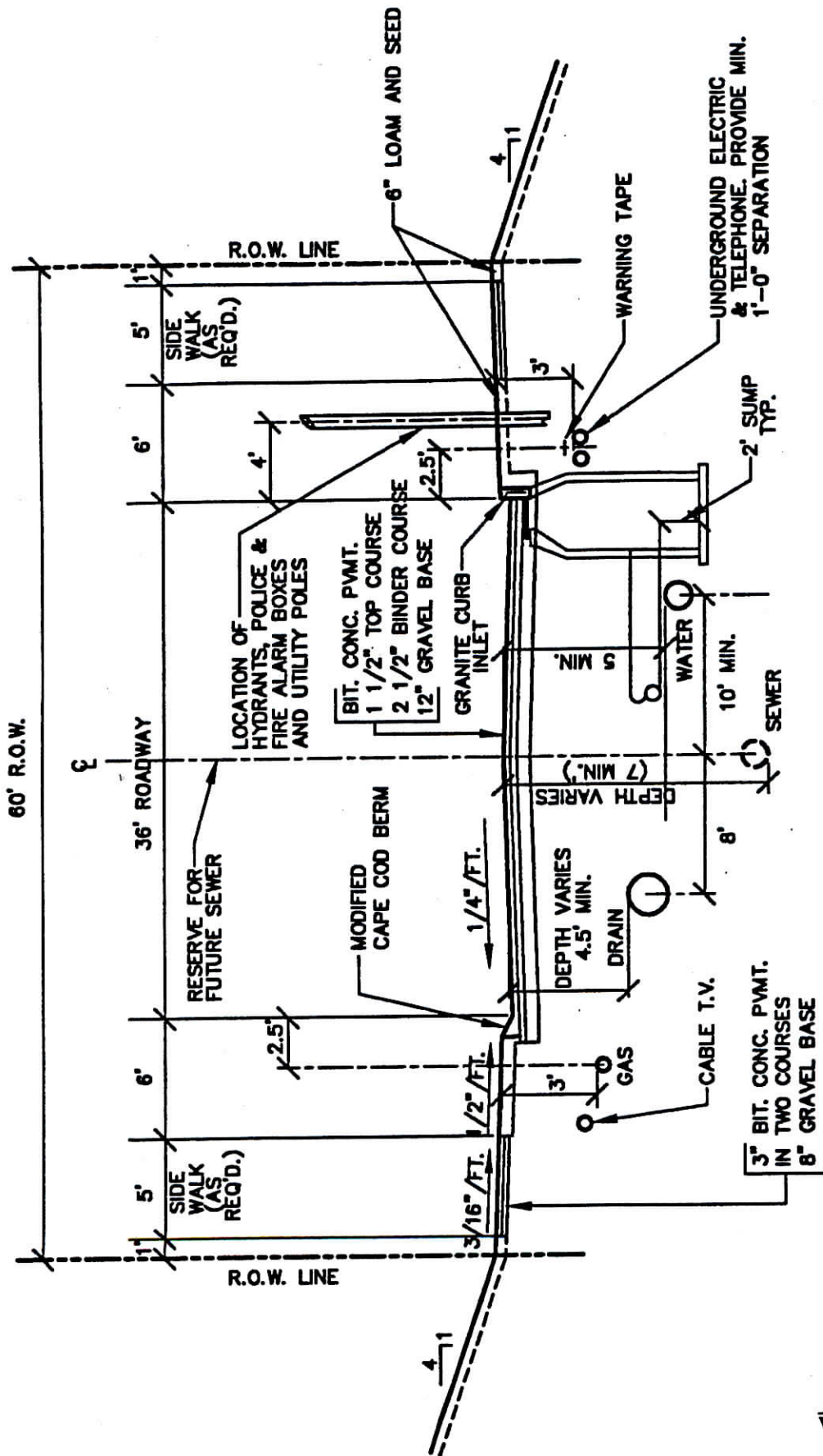
TYPICAL SECTION
SECONDARY STREET-TYPE II SUBDIVISION
 NOT TO SCALE



MILLIS PLANNING BOARD
 MILLIS, MASS.

FIGURE 1-B

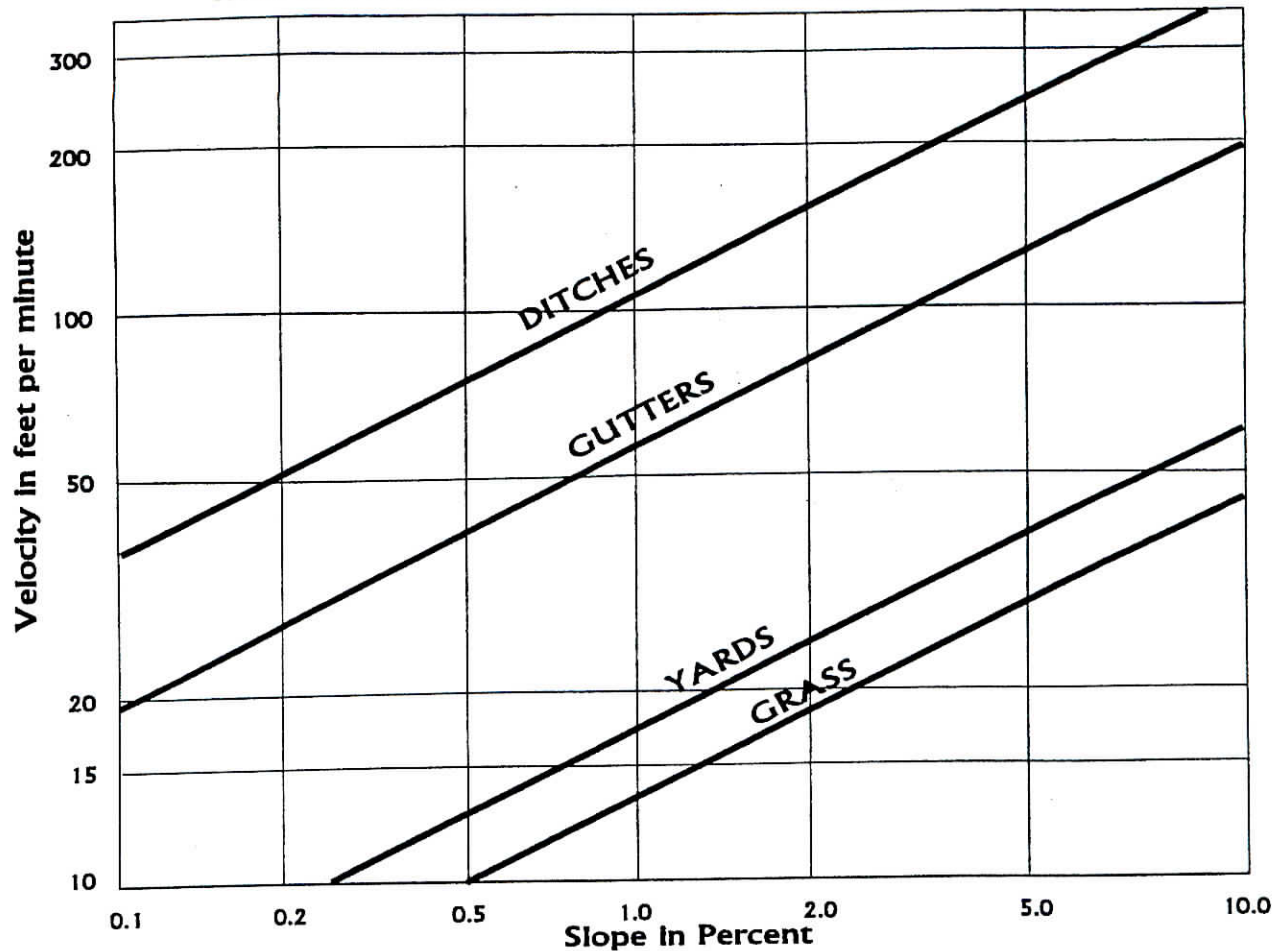
REVISED 9/93



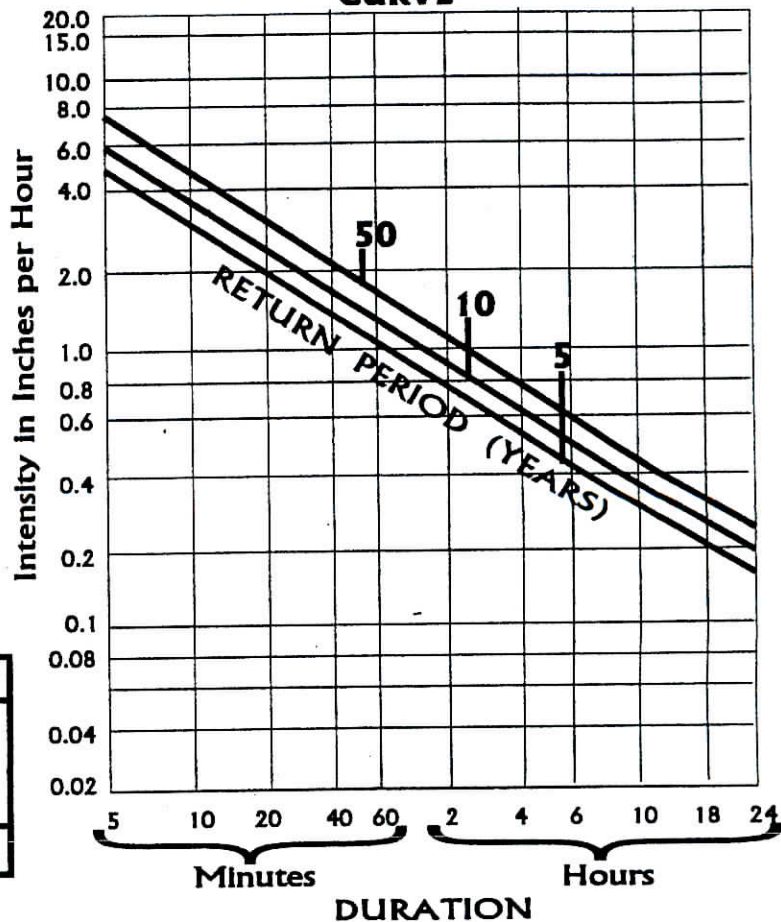
TYPICAL SECTION
PRIMARY STREET-TYPES I & II SUBDIVISIONS
NOT TO SCALE

MILLIS PLANNING BOARD
MILLIS, MASS.

FIGURE 1-C



RAINFALL INTENSITY - DURATION FREQUENCY CURVE

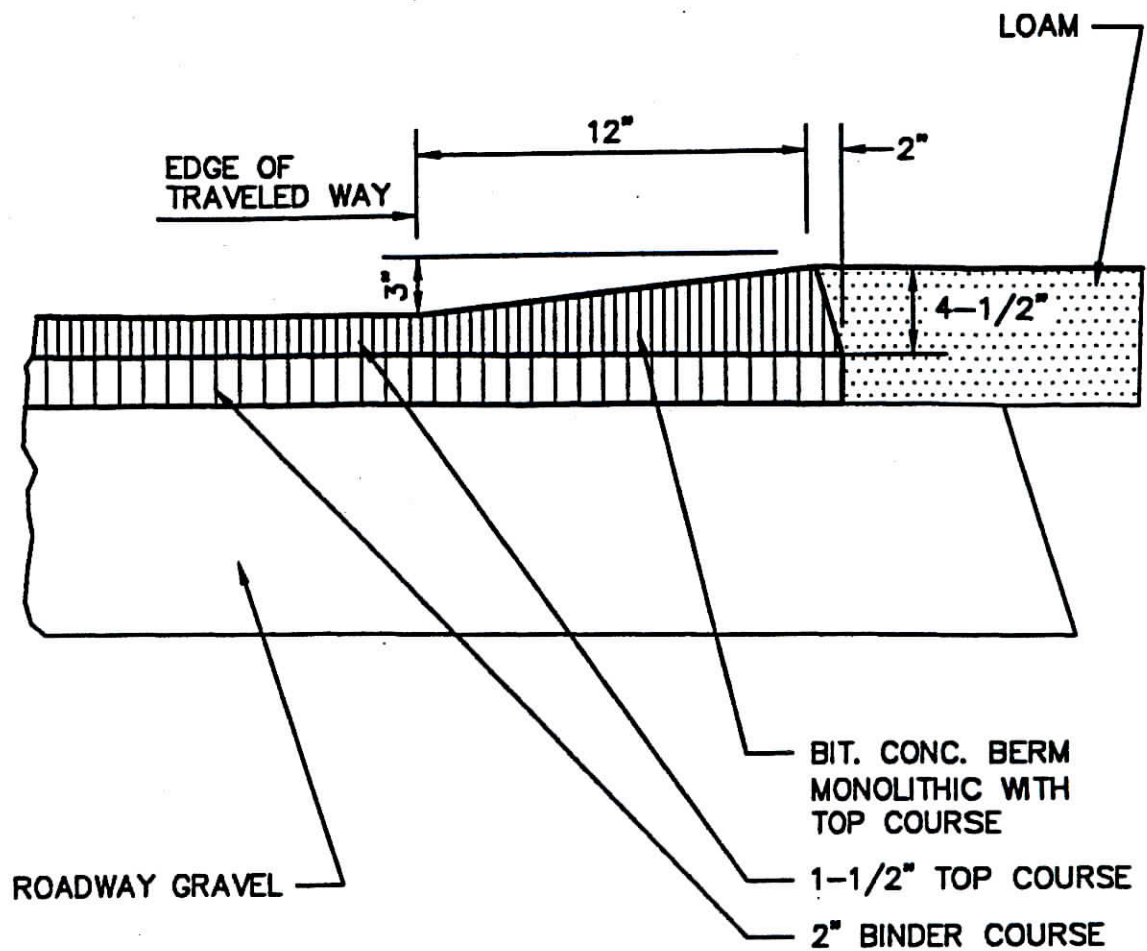


SOURCE: U.S. Weather Bureau
Technical Paper No. 25, December,
1955 and averaging of various
rainfall intensity - duration curves.

TOWN OF MILLIS • MASSACHUSETTS

DRAINAGE CHARTS

Figure 1-D



MODIFIED CAPE COD BERM

NOT TO SCALE

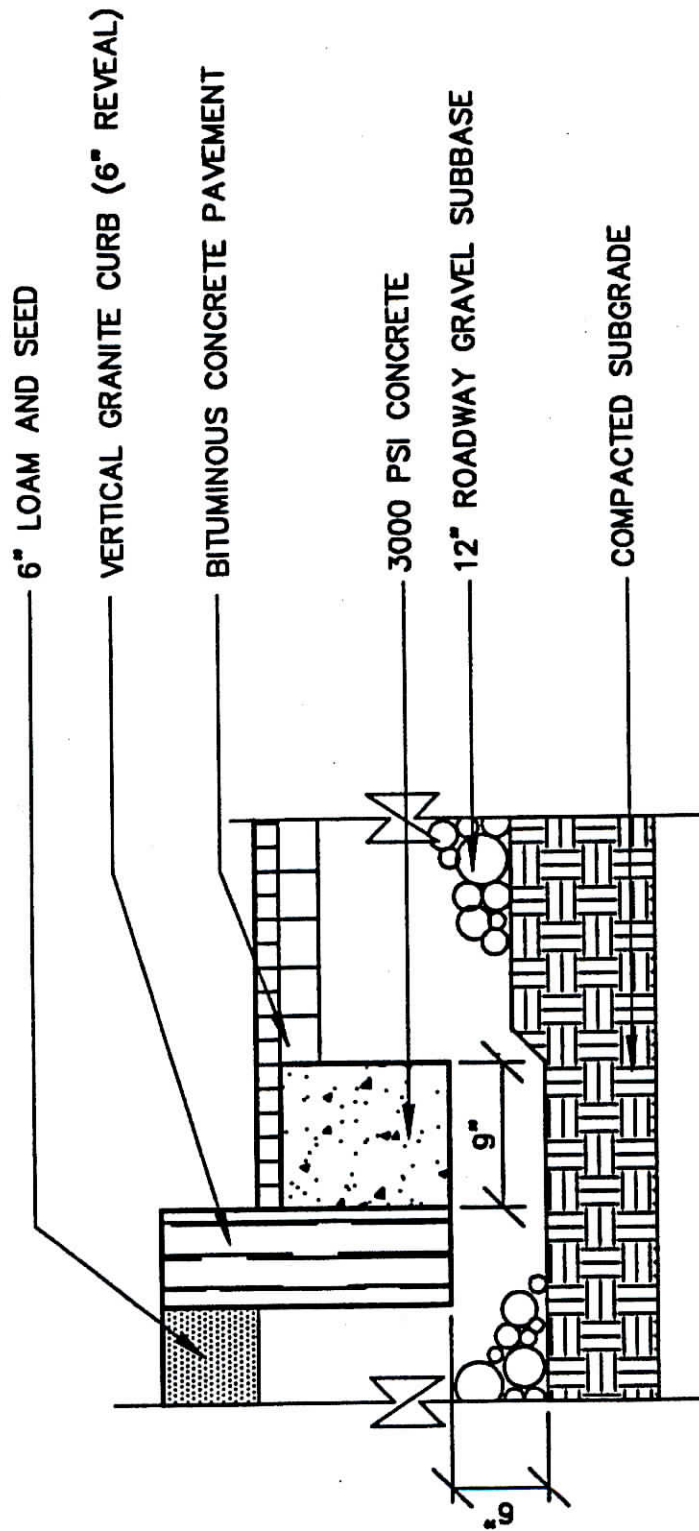


91-256.24

MILLIS PLANNING BOARD
MILLIS, MASS.

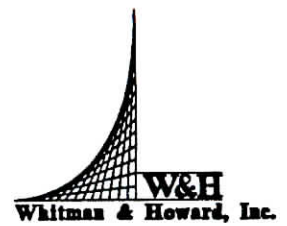
FIGURE 2

REVISED 9/93



VERTICAL GRANITE CURBING

NOT TO SCALE



MILLIS PLANNING BOARD
MILLIS, MASS.

FIGURE 3

REVISED 9/93

SECTION 6

REQUIRED IMPROVEMENTS FOR AN APPROVED SUBDIVISION

6.1 Required Improvements

All streets, utilities, shoulders, curbing, sidewalks, planting strips, side slopes, street name signs, monuments and markers, drainage systems, water systems, sewerage systems, and easements shall be obtained and installed by the subdivider. The obtaining and installing of these improvements shall be in accordance with Section 5.0 of these Rules and Regulations.

6.2 Sewer Pump Stations

- a. Whenever proposed connections or main extensions to the Millis municipal system contain or rely on pump stations and force mains of any configuration, the pump station, all appurtenances and force mains shall be owned and maintained by the applicant in perpetuity.
- b. The type of pump station utilized by the applicant shall be acceptable to the Department of Public Works.
- c. Prior to obtaining approval for connection or extension to the municipal sewer system, the applicant shall submit an "Agreement for Private Ownership and Maintenance" of any pump station and appurtenances and any force main. Said agreement shall be in recordable form and provide that:
 1. The applicant shall accept full responsibility and ownership, maintenance and repair of such facilities;
 2. The applicant shall hold the Town harmless and indemnify the Town against any liability resulting from any defective materials, workmanship or operation in connection with the installation of said facilities;
 3. The applicant shall, prior to proceeding with construction of the extension or connection, provide the Town with a surety bond in the amount determined to be sufficient by the Board of Selectmen to guarantee the materials and workmanship for a minimum period of twenty-five (25) years;
 4. The applicant shall perform all work in accordance with the contract specifications of the Town for said facilities;
 5. The applicant shall, prior to proceeding with construction of the connection or extension, provide the Town with executed covenant, in a form acceptable to the Town, which covenant shall specify the perpetual obligations of the applicant, its successors and its assigns as to the ownership and maintenance of the facilities;

6. The applicant shall provide a maintenance plan and schedule, acceptable to the Millis Department of Public Works, which plan and schedule shall be referenced and incorporated into said covenant;
7. In the event that the applicant does not intend to retain responsibility for the facilities, the applicant shall establish a trust or an incorporated homeowners association, and shall deed the land containing the facilities to said trust or corporation. The trust instrument/articles of incorporation shall contain a provision which sets forth the trustee(s)/corporate officers' responsibilities for the continued maintenance of the facilities, and a requirement that the trustee(s)/officers be bonded.

If the facilities are to serve a subdivision or condominium development, the trust instrument/articles of incorporation shall provide for assessment of the subdivision lot owners or unit owners for costs of maintenance and repairs.

The Town of Millis shall be designated as a beneficiary of any trust created under this provision. If an incorporated homeowners association is established, the articles of incorporation shall provide that the shareholders cannot dissolve the corporation without prior, written approval of the Millis Board of Selectmen. The trust instrument/articles of incorporation shall be recorded in the Norfolk County Registry of Deeds.

8. The applicant shall reference the recorded covenant and the trust instrument/articles of incorporation in the deeds of any affected subdivision lots or condominium units conveyed out by the applicant.

In addition to the Agreement, the applicant shall also submit evidence of its fee simple ownership of the land on which the pump station(s) and/or force main(s) are to be installed, as well as evidence of its fee simple ownership for all lots or condominium units to be affected by the establishment of a trust or homeowners association pursuant to the foregoing paragraph (c)7.

- d. Failure to comply with these regulations shall result in a rejection of the application to enter into the sewer system.

SECTION 7

ADMINISTRATION

7.1 Inspection and Control

7.1.1 At the points hereinafter indicated, the construction of required streets and other improvements shall be inspected:

- a. The installation of underground utilities and services shall be inspected as appropriate by the Agent or his appointed representative before the backfilling of trenches.
- b. The roadway shall be inspected prior to each required construction step by the Agent upon completion of the subgrade, base course, binder and surface course.
- c. The sidewalk shall be inspected prior to each required construction step.
- d. Following the completion of all the improvements required by Section 5.0, the subdivision shall be inspected by the Agent, Department of Public Works, and other appropriate Town Departments.

7.1.2 Unless the approval of the work completed, including approval of materials used, to each point has been given in writing, no further work shall be done until such work is subsequently completed to the satisfaction of the Agent and the Department of Public Works and/or the appropriate Town Department, which shall be given in writing.

7.1.3 Inspection shall be requested by the applicant at least 48 hours in advance by notice to the Agent using Form K.

7.1.4 Inspection of improvements required in Section 6.0 shall be by the Agent and the appropriate Town Departments. The cost of such inspections shall be paid by the applicant at a rate of \$0.25/linear foot of roadway, including utilities therein and \$0.15/linear foot for each utility not in the roadway for all inspections.

If the Town forces cannot perform the inspection due to the size or complexity of the project or the unavailability of personnel, the Town may retain the services of a private engineer to perform such inspection service. The total cost of such services, plus 10 percent to pay the Town's administrative costs, shall be paid by the applicant. The Town shall require that all such inspection costs be paid with the submission of Form K.

*7.1.5, etc. See insert at end of document.

- 7.2 Variation: Strict compliance with the requirements of these Rules and Regulations may be waived when, in the judgment of the Board, such action is in the public interest and not inconsistent with the Subdivision Control Law.
- 7.3 Amendments: These rules and Regulations may be amended from time to time in accordance with Section 81-Q of the Subdivision Control Law.
- 7.4 Validity: The invalidity of any of the foregoing rules, regulations and requirements shall not affect the validity of the remainder.
- 7.5 Interpretation: Whenever the regulations made under the authority hereof differ from those prescribed by any bylaw or other regulations, that provision which imposes the greater restriction or the higher standard shall govern.
- 7.6 Appendix: All forms appended hereto shall be a part of the *Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts*.

SECTION 8

EFFECTIVE DATE AND REPEALER

- 8.1 **Effective Date:** These Rules and Regulations shall be effective on and after the 3rd day of July, 1974, the date of a separate copy certified by the Town Clerk, as adopted by the Planning Board, was transmitted by the Planning Board to both the Register of Deeds of Norfolk County and the Recorder of the Land Court.
- 8.2 **Repealer** Any previous Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts, as adopted by the Millis Planning Board, including those adopted in August, 1960, including all amendments thereto, are repealed in whole.

Appendix

SECTION A

1 of 3

FEE SCHEDULE

The Millis Planning Board fees shall consist of (1) Application Fees and (2) Review Fees as set forth below. The Application Fee and initial Review Fee shall both be paid at the time of application. Any additional costs incurred by the Planning Board, in regard to the "project review", are to be paid in full by the applicant.

A. Pre-Preliminary Plan

Application Fee: No Charge

Review Fee: No Charge

B. 81P Plan - Plan Not Requiring Subdivision Approval

Application Fee: \$100.00 plus \$50.00 per lot shown on the plan.

1. ~~Each plan submitted: \$50.00~~

2. ~~Each plan resubmitted: \$50.00~~

C. Subdivision Plans

1. Preliminary Plans

Application Fee: \$200.00

Review Fee: \$300.00 plus \$50.00 per lot

2. Definitive Plan

Application Fee: \$350.00

Review Fee: \$1,500.00 plus \$150.00 per lot

3. Each Revision to Definitive Plans Under Review

Application Fee: Included in Application Fee for Definitive Plan

Review Fee: Included in Review Fee for Definitive Plan

4. Amendment, Modification or Revision of Approved Definitive Plan

Application Fee: \$250.00

Review Fee: \$2,000.00

SECTION A

2 of 3

FEE SCHEDULE

5. Bonding, Including Reduction and Release Requests, and Estimates

Application Fee: No Charge

Review Fee: \$1,000.00

6. Performance Inspections

Application Fee: No Charge

Review Fees: \$1.25 per linear foot of roadway with a minimum fee of \$750. The review fee is payable at the time of endorsement of the definitive plan.

Application Fees shall be payable to the Town of Millis; Review Fees shall be payable to "Millis Planning Board Review Account".

Review Fee

1. When reviewing an application for, or when conducting inspections in relation to subdivision approval, 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 project's potential impacts, or because the Town lacks the necessary expertise to perform the work related to the permit. The Board may require that applicants pay a "project review fee" consisting of reasonable costs incurred by the Board for the employment of outside consultants engaged by the Board to assist in the review of a proposed project.
2. 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, ordinances/by-laws, 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 project during construction or implementation.
3. 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 project or projects 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 a review fee shall be grounds for denial of the special permit application.
4. At the completion of the Board's review of a project, 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.
5. 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 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 month following the filing of the appeal, the selection made by the Board shall stand.

Form A

1 of 1

USE UPDATED FORM FROM WEBSITE

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 Section 3.1., at least 24 hours before a regularly scheduled meeting of the Planning Board.

Millis, Massachusetts, _____ 19__

To the Planning Board:

The undersigned, believing that the accompanying plan of his property, in the Town of Millis, 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 _____
Print or Type *Signature*

Address _____

2. Name of Owner _____
Print or Type *Signature*

Address _____

3. Name of Engineer or Surveyor _____

Address _____

4. Deed of property recorded in _____ Registry,

Book _____ Page _____

5. Location and Description of Property, including lot and assessor's number:

Date of Submission _____

Town Clerk _____
Signature

**Application for Approval
of Preliminary Plan**

File one completed form with the Planning Board and one copy with the Town Clerk, in accordance with the requirements of Section 4.2., at least seven (7) days before a regularly scheduled meeting of the Planning Board.

Millis, Massachusetts, _____ 19__

To the Planning Board:

The undersigned herewith submits the accompanying Preliminary Plan of property, located in the Town of Millis, for approval as a subdivision under the recommendations of the Subdivision Control Law and the Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts, including the requirements of Section 4.2.

1. Name of Applicant _____
*Print or Type**Signature*

Address _____

2. Name of Owner _____
*Print or Type**Signature*

Address _____

3. Name of Engineer or Surveyor _____

Address _____

4. Deed of property recorded in _____ Registry,

Book _____ Page _____

5. Location and Description of Property:

Date of Submission _____

Town Clerk _____
Signature

**Application for Approval
of Definitive Plan**

File one completed form with the Planning Board and one copy with the Town Clerk, in accordance with the requirements of Section 4.3., at least seven (7) days before a regularly scheduled meeting of the Planning Board.

Millis, Massachusetts, _____ 19__

To the Planning Board:

The undersigned herewith submits the accompanying Definitive Plan of property, located in the Town of Millis, for approval as a subdivision under the requirements of the Subdivision Control Law and the Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts, including the requirements of Section 4.3.

1. Name of Applicant _____
*Print or Type**Signature*

Address _____

2. Name of Owner _____
*Print or Type**Signature*

Address _____

3. Name of Engineer _____
*Print or Type**Signature*

Address _____

4. Name of Surveyor _____
*Print or Type**Signature*

Address _____

5. Deed of property recorded in _____ Registry,

Book _____ Page _____

6. Location and Description of Property:

Form C

2 of 2

Millis, Massachusetts, _____ 19__

The following are all the mortgages and other liens or encumbrances on the whole or any part of the above described property:

The undersigned hereby covenants and agrees with the Town of Millis upon approval of the Definitive Plan:

1. To construct the ways and install the municipal services as finally approved by the Planning Board.
2. To design and construct the ways and design and install, with payment of necessary inspection fees charged by the Town, the municipal services in accordance with the Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts, with the rules and instruction of the Town Board of Health, appropriate department heads, and with the Definitive Plan and its accompanying material as finally approved by the Planning Board.
3. At the laying out and acceptance of said ways, all municipal services within the ways will become the property of the Town of Millis at no cost to said Town, unless otherwise agreed upon.

This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Owner of Record _____
Print or Type Name *Signature*

Address

Before me appeared _____, Owner of Record, and made oath that the above statements subscribed to (him/her) are true.

Notary Public

Commission Expires: _____

Note: Complete Form "D"
and attach.

Date of Submission: _____

Town Clerk: _____
Signature

Form D

1 of 2

(*USE FORM FROM ASSESSOR'S OFFICE)

Certified List of Abutters

Millis, Massachusetts, _____ 19__

(Fill in this space with rough sketch of land described in this petition, and write against boundary lines and name and mailing address of adjoining owners in their relative positions. Include owners of land separated from the subdivision only by a street.)

**Planning Board
Millis, Massachusetts**

Gentlemen:

This is to certify that at the time of the last assessment for taxation made by the Town of Millis, the names and addresses of the parties assessed as adjoining owners of the parcel of land shown above were as above written, except as follows:

Date of Verification _____

Assessor _____
Signature

Millis, Massachusetts, _____ 19__

To: 1.0 File
2.0 Applicant
3.0 Agent
4.0 Board of Assessors
5.0 Board of Health
6.0 Board of Selectmen
7.0 Building Inspector
8.0 Fire Department
9.0 Police Department
10.0 Board of Public Works
11.0 Tree Warden
12.0 Conservation Commission

From: Planning Board

Subject: _____
(description of plan, date, etc.)

1. The subject named plan herewith attached has been submitted to the Planning Board for approval as a subdivision.

For the guidance of the Planning Board, will you please note any appropriate comment or approval on the blank below and/or on the plan itself and return to the Planning Board as soon as possible.

2. Under the requirements of Section 81-U, of Chapter 41, of the General Laws, the Board of Health must report to the Planning Board, in writing, approval or disapproval of said plan, and, in the event of disapproval, shall make specific findings as to which, if any, of the lots in the subdivision cannot be used as building sites without injury to the public health.

Millis, Massachusetts, _____ 19__

(donot detach)
-----**To:** **Planning Board****Date:** _____**Subject:** _____
(description of plan, date, etc.)

1. The undersigned **APPROVES / DISAPPROVES** (cross out one) of the subject named subdivision plan insofar as its requirements are affected.

2. The following comments are offered for the guidance of the Planning Board.

3. Bond requirement:* \$_____.

Department _____

Signed _____

*For that portion of work reviewed.

Notice of Subdivision Approval or Disapproval

Millis, Massachusetts, _____ 19__

To: Town Clerk

The Planning Board on _____ by _____ vote
*Date*ENDORSED: "Planning Board approval under Subdivision Control Law
not required."

DISAPPROVED

APPROVED with bonds or surety / with conditions (cross out one)

MODIFIED AND APPROVED with bonds or surety / with conditions (cross out one)

with the following qualifications and modifications:

The applicant or his/its executors, administrators, devisees, heirs, successors, and assigns shall fully and satisfactorily observe and perform, in the manner and in the time therein specified, all of the covenants, conditions, agreements, terms and provisions contained in the Application for Approval of Definitive Plan (Form C)

The following subdivision plan:

Name or description _____

New street names _____

Submitted by _____

Address _____

On _____
Date

Pending termination of the statutory twenty-day appeal period.

Form F

2 of 2

Millis, Massachusetts, _____ 19__

(Attest) _____ (Signed) _____
(Secretary, Planning Board) (Chairman, Planning Board)

Enclosure: (To Town Clerk and applicant only) Certified copy of Planning Board vote
if disapproved or modified.

cc:	1.0 File	7.0 Building Inspector
	2.0 Applicant	8.0 Fire Department
	3.0 Agent	9.0 Police Department
	4.0 Board of Assessors	10.0 Board of Public Works
	5.0 Board of Health	11.0 Tree Warden
	6.0 Board of Selectmen	12.0 Conservation Commission

PERFORMANCE AGREEMENT – SECURED BY A SURETY BOND

This Surety Performance Agreement (the "Agreement") is made this date by and between the Town of [insert name], by and through its Planning Board (the "Town" or "Planning Board"), [insert name of applicants], a Massachusetts corporation with a principal place of business at [insert address] ("[insert short name]") and [insert name of surety company], a corporation authorized to do business in Massachusetts, with an office at [insert address] (the "Surety"), pursuant to and in accordance with the requirements of M.G.L. c.41, §81U.

This Agreement shall be and is secured by a subdivision bond issued by the Surety (the "Bond"). (A true copy of the Bond is attached hereto as Exhibit #1.) The purpose of the Agreement and the Bond is to secure construction of the ways and installation of the municipal services shown on a definitive subdivision plan depicting proposed lots and entitled " , prepared by , and dated , as revised through for land located off of , MA and owned by

Know all persons by these presents that [name of applicants] and the Surety hereby bind and obligate themselves, their respective executors, administrators, devisees, heirs, successors, and assigns, jointly and severally to the Town, in the sum of [insert amount in words and numbers] (\$) .00) as secured by the Bond to secure the performance by [insert name of applicant] of all covenants, conditions, agreements, terms and provisions contained in the following:

1. Application for Approval of Definitive Plan (Form C) dated ;
2. The Subdivision Control Law (M.G.L. c.41, §81K, et seq.);
3. The [insert name] Planning Board's Subdivision Rules and Regulations, dated [insert date of applicable regulations];
4. Certificate of Approval issued by the Planning Board, dated [insert date], including any and all conditions of approval;
5. The Definitive Plan, as qualified by the Certificate of Approval, and as recorded in the [insert name of County] Registry of Deeds as [insert Plan Book or other Book and Page information];
6. Form F Subdivision Covenant, dated [insert date, if applicable];
7. A plan entitled [insert title], Sheets [itemize sheet numbers], by [name of engineer, etc., who prepared the plan], dated [insert date], as revised through [insert date or dates];
8. Form G Certificate of Performance Covenant of Approval Release, dated [insert date, if applicable]; and
9. Any other applicable documents.

The Agreement shall remain in full force and effect unless and until [insert name of applicant] has fully and satisfactorily performed all obligations, or has elected to provide another method of securing performance as provided under M.G.L. c.41, §81U.

Upon satisfactory completion by [insert name of applicant] of all obligations as specified herein, on or before [insert deadline for completion of improvements] or such later date as may be specified by vote of the Planning Board with a written concurrence of [insert name of applicant] and the Surety, the interest of the Town in the Bond shall be released, the Bond shall be returned to the Surety and this Agreement shall become void.

In the event [insert name of applicant] should fail to complete the construction of ways and installation of municipal services as specified in this Agreement and within the time herein specified, this Agreement may be enforced, in whole or in part, by the Planning Board, for the benefit of the Town to the extent of the reasonable cost to the Town of completing such construction or installation as specified in this Agreement.

Election by the Planning Board not to enforce this Agreement for any period of time shall not be deemed to be a waiver of the right to enforce. Any unused portion of the surety shall be released and returned to the Surety as required under M.G.L. c.41, §81U.

The parties hereby agree and admit that Massachusetts Law shall govern the adjudication of any dispute regarding this Agreement. The parties agree that any dispute concerning this action shall be heard by the [insert name of County] Superior Court or the United States District Court for the District of Massachusetts. The parties further agree to accept service of process by certified mail at the following addresses:

[insert name of Town] Planning Board
[insert address]

[insert name of applicant]
[insert address]

[insert name of surety]
[insert address for surety]

In addition, the Surety hereby agrees and admits, in exchange for good consideration, the receipt of which is hereby acknowledged by the Surety, that:

- 1) The Town and the Planning Board shall have the right to enforce the terms of the Subdivision Bond;
- 2) Massachusetts Law shall govern the adjudication of any dispute regarding the Subdivision Bond;
- 3) The [County] Superior Court or United States District Court for the District of Massachusetts shall have personal jurisdiction over the Surety in any litigation regarding the Subdivision Bond; and
- 4) Service of process shall be deemed effective upon the Surety upon delivery of same when forwarded to the Surety by certified mail at the address noted above; however, the Surety may alter the address upon affording written notice to the Planning Board and its counsel, by certified mail.

- 5) In the event that **[insert name of the applicant]** should fail in its obligations under this Agreement, the Surety shall have the option of performing the subject work forthwith or making the funds guaranteed by the Bond available to the Town upon written demand from the Town. Failure by the Town to seize the funds when a default occurs shall not be deemed a waiver of the right to do so. In the event that a court of competent jurisdiction determines that the Surety failed to perform the work or to make the funds available, the Surety agrees to compensate the Town for its attorneys' fees and legal costs incurred to enforce the Bond.

Any amendments to this Agreement or to the aforesaid Bond shall be agreed upon in writing by all parties to this Agreement.

In witness whereof, we have hereunto set our hands and seals this _____ day of _____, 2001.

Signatures of the **[insert name]** Planning Board

[insert name of County], SS _____, 200__

Then personally appeared before me _____, one of the above-named **[insert name]** Planning Board Members, who identified him/herself to me, and acknowledged the foregoing instrument to be the free act and deed of said Planning Board, before me.

Notary Public
My commission expires:

[insert name of applicant]
By: President/Treasurer

[insert name of County], SS _____, 200__

Then personally appeared before me _____, who is known to me or satisfactorily identified him/herself to me, and acknowledged the foregoing instrument to be his/her free act and deed on behalf of the **[insert name of applicant]**, before me.

Notary Public
My commission expires:

Notary Public
My commission expires:

COVENANT

_____, 200

Millis, Massachusetts

KNOW ALL MEN by these presents that: _____ [covenantors] _____ have submitted an application dated _____, to the Millis Planning Board for approval of a definitive plan of a subdivision entitled _____, dated _____ and prepared by _____, regarding land located at _____, and showing _____ proposed lots.

IN CONSIDERATION of said Planning Board of Millis in the county of Norfolk approving said plan, the undersigned [covenantors] hereby covenant and agree with the inhabitants of the Town of Millis as follows:

1. That [covenantors] are the owners in fee simple absolute of all the land included in the subdivision (the "Land") and that there are no mortgages of record or otherwise on any of the land, except for those described below and that the present holders of said mortgages have assented to this contract prior to its execution by the undersigned.
2. That [covenantors] will not sell or convey any lot in the subdivision or erect or place any permanent building on any lot until the construction of ways and installation of municipal services necessary to adequately serve such lot has been completed in accordance with the covenants conditions, agreements, terms and provisions as specified in the following:
 - a. The Application for Approval of Definitive Plan, dated _____.
 - b. The Subdivision Control Law and the Planning Board's Rules and Regulations governing this subdivision.
 - c. The certificate of approval and the conditions of approval specified therein, issued by the Planning Board, dated _____.
 - d. The definitive plan as approved and as qualified by the certificate of approval.
 - e. Other document(s) specifying construction to be completed, namely:

However, a mortgagee who acquires title to the mortgaged premises by foreclosure or otherwise and any succeeding owner of the mortgaged premises or part thereof may sell or convey any lot subject only to that portion of this covenant which provides that no lot be sold or conveyed or shall be built upon until ways and services have been provided to serve such lot. Additionally, [covenantors] may convey land between each other or their successors or assigns as may be necessary to obtain financing for the construction of the ways and services for the approved subdivision, provided that no lot which is so sold or conveyed shall be built upon until ways and services have been provided to serve such lot.

3. That this covenant shall be binding upon the executors, administrators, devisees, heirs, successors and assigns of the [covenantors] and shall constitute a covenant running with the land included in the subdivision and shall operate as restrictions upon the land.
4. That particular lots within the subdivision shall be released from the foregoing conditions upon the recording of a certificate of performance executed by a majority of the Planning Board and enumerating the specific lots to be released.
5. That nothing herein shall be deemed to prohibit a conveyance by a single deed subject to this covenant, of either the entire parcel of land shown on the subdivision plan or of all lots not previously released by the Planning Board.
6. That the undersigned agrees to record this covenant with the Norfolk County Registry of Deeds, forthwith, or to pay the necessary recording fee to the said Planning Board in the event the Planning Board shall record this agreement forthwith. Reference to this covenant shall be entered upon the definitive subdivision plan as approved.
8. A deed of any part of the subdivision in violation of the covenant shall be voidable by the grantee prior to the release of the covenant; but not later than three (3) years from the date of such deed as provided in Section 81-U, Chapter 41, M.G.L.
9. That this covenant shall be executed before endorsement of approval of the definitive plan by the Planning Board and shall take effect upon the endorsement of approval.
10. This covenant shall take effect upon the signing of the same. Upon final completion of the construction of ways and installation of municipal services as specified herein, within two years from the execution hereof,

the Planning Board shall release this covenant by an appropriate instrument, duly acknowledged. Failure to complete construction and installation within two years from the execution hereof or such later date as may be specified by vote of the Planning Board with a written concurrence of the applicant, shall result in automatic rescission of the approval of the definitive subdivision plan. Upon performance of this covenant with respect to any lot, the Planning Board may release such lot from this covenant by an appropriate instrument duly recorded.

11. Nothing herein shall prohibit the [covenantors] from varying the method of securing the construction of ways and installation of municipal services from time to time or from securing by one, or in part by one and in part by another of the methods described in M.G.L., Chapter 41, Section 81-U as long as such security is sufficient in the opinion of the Planning Board to secure performance of the construction and installation.
12. The following waivers were allowed by the Planning Board and shall be shown on the applicable plan when the same is recorded: _____.
13. This Covenant shall not be deemed to be in lieu of a bond or any other performance guarantee permissible under the Millis Subdivision regulations or G.L. c. 41, Section 81-U, if any, that the Millis Planning Board may require.

For the [covenantors] titles to the Land, see the following, all recorded in the Norfolk County Registry of Deeds:

(a) _____;
_____;

The present holder of a mortgage upon the Land is _____ of _____ The mortgage is dated _____ and recorded in Norfolk County Registry of Deeds, Book _____, Page _____. In execution hereof, said mortgagee agrees to hold the mortgage subject to the covenants set forth above and agrees that the covenants shall have the same status, force and effect as though executed and recorded before the taking of the mortgage and further agrees that the mortgage shall be subordinate to the above covenant.

IN WITNESS WHEREOF we have hereunto set our hands and seals this _____ of _____, 2001.

[covenantor]

[covenantor]

_____, Mortgagee

Acceptance by a Majority of the
Planning Board of the Town of Millis

COMMONWEALTH OF MASSACHUSETTS

_____, ss

_____, 2001

Then personally appeared before me the above named [covenantors] and
acknowledged the foregoing to be his free act and deed.

Notary Public
My commission expires: _____

COMMONWEALTH OF MASSACHUSETTS

_____, ss

_____, 2001

Then personally appeared before me the above named [mortgagee] and
acknowledged the foregoing to be his free act and deed.

Notary Public

My commission expires: _____

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 2001

Then personally appeared before me the above named members of the Millis
Planning Board and acknowledged the foregoing to be their free act and deed.

Notary Public

My commission expires: _____

Request for Release of Bonds, Surety or Conditions

Millis, Massachusetts, _____ 19__

To:

From: Planning Board

Subject: _____
(description and name, if any)

Submitted by: _____

Address: _____

The improvements specified in Section 6.0 of the Planning Board Rules and Regulations are believed to have been completed on the below described subdivision and all covenants, conditions, agreements, terms and provisions contained in the Application for Approval of Definitive Plan (Form C) fulfilled. Please indicate your approval or disapproval of release of bonds, surety or conditions *insofar as the requirements of your department only* are concerned. If release of conditions is indicated, specify for which lots(s) you approve release.

(Signed) _____
(Chairman, Planning Board)

----- (do not detach) -----

To: Planning Board

Date: _____

Subject: _____
(description and name, if any)

Insofar as the requirements of this department are concerned, the release of bonds, surety or conditions for the above described subdivision is:

APPROVED

(Cross out one)

DISAPPROVED

If disapproved, state reason: _____

Department _____

Signed _____

Request for Inspection of Construction

Millis, Massachusetts, _____ 19__

To:

Applicant: _____
Print or Type Name *Signature*_____
*Address*Owner: _____
Print or Type Name *Signature*_____
*Address*Name of Subdivision: _____
*Print or Type Name*Location and Description: _____
 _____**INSPECTION**

Req'd	Item	Date	Inspector	Dept.	Remarks
	1. Roads a. Sub-base b. Base Crse. c. Binder Crse. d. Surface Crse. e. Elevations and grades f. Length 2. Bituminous Concrete Beams 3. Sidewalks a. Sub-base b. Base Crse. c. Cement Concrete d. Binder Crse. e. Surface Crse. 4. Loam & Seed				

Form K**2 of 2**

Millis, Massachusetts, _____ 19__

Req'd	Item	Date	Inspector	Dept.	Remarks
	5. Street Name Signs				
	6. Monuments				
	7. Street Lighting				
	8. Fire Alarm System				
	9. Police Call System				
	10. Drainage System				
	a. Length of pipe				
	11. Water System				
	a. Length of pipe				
	12. Sewer System				
	a. Length of pipe				

Final Acceptance

(See Form J)

cc: Planning Board

Notice of Release of Bonds or Surety

Millis, Massachusetts, _____ 19__

To: Town Clerk

From: Planning Board

Subject: _____
(description and name, if any)

Submitted by: _____

Address: _____

The improvements required by Land Subdivision Rules and Regulations of the Planning Board of the Town of Millis, Massachusetts have been completed on the above described subdivision. You are requested to release any bonds or surety filed for said subdivision:

Signed _____
(Secretary/Chairman, Planning Board)

cc: File

Release of Conditions - Certificate of Performance

Millis, Massachusetts, _____

Certification is herewith given that _____
has complied with the conditions imposed by the Planning Board of the Town of Millis,
under the Land Subdivision Rules and Regulations of the Planning Board of the Town
of Millis, Massachusetts, on lot no. _____ or lots no. _____,
as shown on plan entitled _____

and recorded in the Norfolk County Registry of Deeds Plan Book _____,
Page _____.

By: _____
(Secretary/Chairman, Planning Board)

MILLIS, MASSACHUSETTS _____
Date

Before me appeared _____, Chairman/Secretary, of
the Millis Planning Board, and made oath that the above statement subscribed to
(him/her) is true.

Notary Public

My Commission Expires: _____
Date

cc: File

**Environmental Assessment
of Subdivision Plan**

File one completed form with the Planning Board and a copy with the Town Clerk
in accordance with the requirements of Section _____.

Millis, Massachusetts, _____ 19__

Subject: _____
(subdivision name)

Predicted Dates: _____
(commencement) (completion)

Projected Cost: _____

Background Information

1. Give a brief description of the proposed subdivision.
2. Describe the geographical area or areas which will be affected by the subdivision, including distinguishing natural and man-made characteristics, and a brief description of the present use of the area or areas.

Assessment of Environmental Damage

Answer the following questions by placing a check in the appropriate space; consider both short and long-term damage. Wherever "No" is checked, indicate, on the lines below the question, why there will be no significant damage.

Short Term		Long Term	
Yes	No	Yes	No

1. Could the subdivision affect the use of a recreational area or area of important aesthetic value?

2. Are any of the natural or man-made features in affected area(s) unique; that is, not found in other parts of the Town?

3. Could the subdivision affect an historical or archeological structure or site?

4. Could the subdivision affect the potential use, extraction, or conservation of a scarce natural resource?

5. Does the subdivision area serve as a habitat, food source, nesting place, source of water, etc. for rare or endangered wildlife or fish species?

Short Term		Long Term	
Yes	No	Yes	No

6. Could the subdivision affect fish, wildlife, or plant life?

— — — —

7. Are there any rare or endangered plant species in the affected area(s)?

— — — —

8. Could the subdivision change existing features of any of the Town waters or wetlands?

— — — —

9. Could the subdivision result in the elimination of land presently utilized for agricultural purposes?

— — — —

10. Will the subdivision require a variance from, or result in a violation of, any statute, ordinance, by-law, regulation or standard, the major purpose of which is to prevent or minimize damage to the environment?

— — — —

11. Will the subdivision require certification, authorization, or issuance of a permit by any local, state, or federal environmental control agency?

— — — —

Short Term		Long Term	
Yes	No	Yes	No

12. Will the subdivision involve the application, use or disposal of potentially hazardous materials?

13. Will the subdivision involve construction of facilities in a flood plain?

14. Could the subdivision result in the generation of significant amounts of noise?

15. Could the subdivision result in the generation of significant amounts of dust?

16. Will the subdivision involve the burning of brush, trees, construction materials, etc.?

17. Could the subdivision result in a deleterious effect on the quality of any portion of the Town's air or water resources? (If yes, indicate whether surface, ground, water.)

Short Term		Long Term	
Yes	No	Yes	No

18. Could the subdivision affect an area of important scenic value?

19. Will the subdivision result in any form of environmental damage not included in the above questions?

Statement of No Significant Environmental Effects

A "yes" answer to any of the questions in Section II indicates that the project may cause significant environmental damage. If you have answered "yes" to one or more of the questions, but still think the project will cause no significant environmental damage, indicate your reasons below.

Conclusions

Place a check in the appropriate box.

1. () it has been determined that the subdivision will not cause significant environmental damage. No further reports will be filed.
2. () It has been determined that the subdivision may cause significant environmental damage.

Signature of Preparing Engineer _____

Seal and Registration Number _____

Address _____

Telephone _____

- cc: 1.0 Agent
2.0 Board of Health
3.0 Board of Selectmen
4.0 Fire Department
5.0 Board of Public Works
6.0 Tree Warden
7.0 Conservation Commission

Section 4, Procedures for the Submission and approval of Plans

4.3.3 Contents

p. Proposed location and grading of driveways. Driveways shall be graded to prevent stormwater runoff from the proposed roadway from entering existing and proposed driveways. Further, driveways shall be graded to prevent stormwater runoff from individual lots from entering existing and proposed roadways.

Section 5, Design and Construction Standards

5.1.5 Pavement Structure

e. At intersection with existing roadways, existing roadway surface course shall be milled over its entire width for a 20-foot distance beyond the extended width of the new roadway. Area shall be re-paved with Class I Bituminous Concrete Pavement Type I-1 (Top Course Mix) of the Standard Specifications. Straight-keyed edge shall be provided to the satisfaction of the Board of Public Works.

f. The paving plant used by the contractor for preparation of bituminous paving materials shall be acceptable to the Board of Public Works who shall have the right to inspect the plant and the making of the material.

g. Contractor shall submit a certified report from a third party verifying that the asphalt batch delivered to the site meets all requirements of the Standard Specifications. Contractor shall further verify the temperature of the mix exceeds 285 degrees Fahrenheit immediately prior to application.

g. Prior to placing pavement, all backfill shall have been properly compacted to eliminate settling of backfill. No pavement shall be placed over poorly compacted backfill. Backfill and gravel base course shall be compacted, brought to the proper elevation, and dressed so that new pavement construction shall be at the required grade. The contractor shall maintain the surfaces of all excavated and disturbed areas until the pavement is placed. If there is a time lapse of more than 24 hours between completion of preparation of subgrade or placing of gravel base course and placing of paving, or if subgrade or gravel base course has been eroded or disturbed by traffic, the subgrade or gravel base course shall be restored before placing paving.

h. The contractor shall remove and acceptably dispose of all surplus and unsuitable material.

i. Before permanent paving is installed, the base shall be brought to the proper grade, and temporary pavement and excess gravel shall be removed.

j. Unless indicated otherwise, all permanent bituminous pavement shall be installed in two courses or more. Bituminous base courses shall be carefully spread and raked to a uniform surface and thoroughly rolled before application of the top course.

k. When installing permanent paving on a bituminous concrete roadway the edges of the existing pavement shall be cut back 12 inches, or more as required, beyond

the trench excavation wall or damaged area to sound undamaged material. The edges shall then be straightened, cleaned, and painted with an accepted cutback asphalt to ensure a satisfactory bond between it and the newly placed surface courses. The existing surface course shall be stripped from the bituminous concrete base course for at least a 6-inch width and trimmed square and straight so that new permanent surfacing shall be placed on undisturbed bituminous concrete base course. Existing pavement that will be under new pavement shall be painted with cutback asphalt to ensure a satisfactory bond. The permanent pavement surface course shall overlap the existing pavement not less than 18 inches and be suitably feathered.

l. All top courses of permanent paving shall be applied with acceptable mechanical spreaders in widths of at least 9 feet.

m. The initial rolling for all bituminous and gravel courses shall be steel-wheel power rollers weighing not less than 240 pounds per inch of tread and equipped with a device for watering the roller. No oil shall be allowed on the rollers. Suitable, self-propelled pneumatic-tired rollers, subject to acceptance by the Board of Public Works, may be permitted for subsequent rolling. Places not accessible to a roller shall be thoroughly compacted with tampers weighing not less than 25 pounds and with a tamping face of not more than 50 square inches. Vibratory compactors may also be used if accepted for gravel base course. Rolling shall be done in accordance with the Standard Specifications to produce the required consolidation, compaction, and finish. When compacting gravel base course to the required density, there shall be no visible creeping or settlement under the final passes of the compacting equipment.

n. Pavement shall be placed so that the entire roadway or paved area shall have a true and uniform surface, and the pavement shall conform to the proper grade and cross section with a smooth transition to existing pavement.

o. All manhole covers, catch basin grates, valve and meter boxes, curbs, walks, and walls shall be adequately protected and left in a clean condition. Where required, the grades of manhole covers, catch basin grates, valve boxes, and similar items shall be adjusted to conform to the finished pavement grade.

p. Placing of the mixture shall be as nearly continuous as possible and the roller shall pass over the unprotected end of the newly placed mixture only when the placing of the course is to be discontinued for such length of time as would permit the mixture to attain initial stability. In all such cases, including the formation of joints as here specified, provision shall be made for proper bond with the new surface for the full specified depths of the courses.

q. All transverse joints, all longitudinal joints of the surface course and all longitudinal joints in the Dense Binder Course under Open Graded Friction Course or Open Graded Friction Course – Modified shall be treated prior to laying the next lane of bituminous concrete as follows:

r. The joint shall be coated with a hot poured, rubberized asphalt sealant meeting the requirements of Federal Specification Number SS-S-1401.

- s. When using pavers in tandem, the use of the hot poured rubberized asphalt sealer may be omitted at the discretion of the Board of Public Works, if the temperature of the mixture at the longitudinal joint does not fall below 200°F prior to the placement of the adjacent mat. No re-heating of the joint shall be permitted.
- t. The hot poured rubberized asphalt shall be applied to the joints from a double-jacketed heating kettle with a positive drive gear pump that is connected to a suitable applicator. The nozzle of the applicator shall be set to deliver sufficient sealant to effectively bond and seal the transverse and longitudinal paving joint between two adjacent lanes of bituminous concrete.
- u. Longitudinal and transverse joints shall be made in a careful manner, well bonded and sealed, and true to line and grade. Where as directed, transverse joints for all courses and longitudinal joints for the top course placed under this or previous contracts shall be cut back to expose the full depth of the course and, when the laying of the course is resumed, the exposed edge of the joint shall be treated as above.
- v. In making joints along any adjoining edge such as curb, gutter or an adjoining pavement, and after the mixture is placed by the mechanical spreader, just enough of the hot material shall be placed by hand method to fill any space left open. These joints shall be properly "set-up" with the back of a rake at the proper height and level to receive the maximum compaction. The work of "setting-up" these joints shall be performed only by competent workmen.
- w. Where and as directed, the first width of any course shall be placed not less than one foot wider than the first width of top course, and successive widths of top and as any other courses shall be so placed that there will be at least a one foot overlap between the joints in the top course and the other course.
- x. The rolling of the successive widths of courses shall overlap and shall be performed so as to leave smooth, uniform joints and cross sections.
- y. During the guarantee period, the contractor shall maintain the bituminous surface and shall promptly make good all defects such as cracks, depressions, and holes that may occur. At all times, the surfacing shall be kept in a safe and satisfactory condition for traffic. If defects occur in surfacing constructed by the contractor, the contractor shall remove all bituminous concrete and base course affected and shall remove adjacent bituminous concrete and base course as is necessary to properly correct the defect. After removing bituminous concrete and base course, the contractor shall correct the cause of the defect and replace the base course and bituminous concrete in accordance with these specifications.

5.3 Curbing

5.3.1 Sloped granite curbing shall be installed along both edges of all roadways (except at driveways). The full arc length of curves at all intersections shall, however, consist of vertical granite curbs, the materials and construction methods of which shall be in accordance with Section 500 of the Standard Specifications.

Granite transition stones shall be installed between all sloped granite curbing in vertical granite curbing and catchbasin throat stones. .

5.3.2. Curb openings at driveways shall be graded based on the top course pavement elevation. Grading shall not allow stormwater runoff from the proposed roadway from entering existing and proposed driveways. Further, driveways shall be graded to prevent stormwater runoff from individual lots from entering existing and proposed roadways.

5.3.3 Curb openings for driveways shall not be allowed within 15-feet of catchbasin structures nor within 10-feet of telephone, cable and electric utility boxes.

5.4.6 Accessible Ramps: In addition to complying with all provisions of the Rules and Regulations of the Architectural Access Board of the Commonwealth of Massachusetts, all accessible ramps shall be constructed of cement concrete with cement concrete or granite transitions stones.

5.9 Pavement Marking: All pavement markings shall be in accordance with the Manual on Uniform Traffic Control Devices, current edition. Further, all markings shall be thermoplastic materials homogeneously composed of pigment, filler, resins, and glass reflectorized spheres. When applied properly and at the designated thickness and width, the stripe shall, upon cooling, be reflectorized and be able to resist deformation by traffic.

- a. Materials and construction methods shall conform, insofar as applicable, to the requirements of the Massachusetts Standard Specifications for Highways and Bridges, dated 1988, together with all errata addenda, additional revisions, and supplemental specifications, all of which are hereinafter referred to as the Massachusetts Standard Specifications.
- b. All painting shall be in accordance with Manual on Uniform Traffic Control Devices
- c. Painting will not be allowed on damp, wet or dirty road surfaces.
- d. The contractor shall notify the Superintendent of Streets 48 hours in advance of painting.
- e. The contractor shall furnish adequate protection to freshly painted lines to keep traffic off of them until thoroughly dry.
- f. Painting will not be allowed if the temperature is below 40° F.
- g. Temporary striping shall be installed on newly applied asphalt. A minimum of two weeks shall pass prior to painting on new pavement.

5.10 Lighting: Street lighting shall be installed along all streets. However, Planning Board may waive streetlights and allow the installation of individually owned and maintained light posts constructed on individual lots within 10 feet of the edge of right of way and the driveway. In addition to individual light posts, streetlights will be required at the intersection of roadways at the discretion of the Planning Board.

5.12.1 General

k. All utility castings shall be installed flush to binder course pavement. Castings shall be raised and mortared with cement concrete no sooner than 45 days before the anticipated top course pavement is applied.

5.12.3, Water: Water shall be tested for Choliform , Heterotrophic Plate Count and other contaminants at the direction of the Board of Public Works and/or its Agent. Sampling including the Chain of Custody shall be solely the responsibility of the Board of Public works and/or its Agent. There shall be no lots released prior to acceptance of the water testing results by the Board of Public Works.

Section 7, Administration

7.1.5 There shall be no lots released within a subdivision until the Subdivision Owner has satisfied any monetary obligations to the Town of Millis Sidewalk Fund.

7.1.6 Town owned water valves shall only be opened and closed by a Town Representative.

7.17 Water shall be tested for Choliform , Heterotrophic Plate Count and other contaminants at the direction of the Board of Public Works and/or its Agent. Sampling including the Chain of Custody shall be solely the responsibility of the Board of Public Works and/or its Agent. There shall be no lots released prior to acceptance of the water testing results by the Board of Public Works.

7.18 All sewer lines shall be cleaned and camera inspected at least twice. Video shall be submitted to the Board of Public Works for its review and approval prior to top course paving and no sooner than 45 days from street acceptance.

7.19 All drain lines shall be cleaned and camera inspected no sooner than 45 days from street acceptance. Video shall be submitted the Board of Public Works for its review and approval.

7.19 Evidence of a Registry of Deeds recording of a Homeowners Association and/or Trust shall be submitted to the Planning Board for review and approval prior to the release of any lots within a subdivision.

7.20 Evidence of a Registry of Deeds recording of all deed restrictions and easements shall be submitted to the Planning Board for review and approval prior to the release of any lots within a subdivision.

7.21 All utilities, including but not limited to the stormwater management system, shall be installed prior to the release of any lots.

7.22 If a subdivision is to include the installation of a Water Booster Station and/or a Sewer Pump Station No Building Permit shall be issued for any lot within the subdivision until after either/or station is operational and inspected by an Agent of the Planning Board.

7.23 All street signs shall be installed prior to the release of any lots.

7.24 11" X 17" Lot plans shall be submitted to the Millis Department of Public Works and the Millis Building Inspector. Plans shall be at a suitable scale to show proposed lot designations and roadways.