

# **SUBDIVISION RULES**

**AND**

# **REGULATIONS**



Town of Marion

Massachusetts

Revised August 15, 2016

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PLANNING BOARD  
RULES AND REGULATIONS GOVERNING  
THE SUBDIVISION OF LAND

Adopted: March 21, 2000, Revised May 5, 2008, Revised August 15, 2016

**SECTION 1000: PURPOSE AND AUTHORITY**

1100. PURPOSE.

These subdivision rules and regulations are hereby enacted, in accordance with the provisions of M.G.L. c. 41, s. 81M, for the purpose of protecting the safety, convenience, and welfare of the inhabitants of the Town of Marion, by regulating the laying out and construction of ways in subdivisions providing access to the several lots therein, but which have not become public ways, and ensuring sanitary conditions in subdivisions and in proper cases parks and open areas. The powers of the Planning Board and the Board of Appeals under these regulations and the subdivision control law shall be exercised with due regard for the provision of adequate access to all of the lots in a subdivision by ways that will be safe and convenient for travel; for lessening congestion in such ways and in the adjacent public ways; for securing safety in the case of fire, flood, panic, and other emergencies; for insuring compliance with the zoning by-law, for securing adequate provision for water, sewerage, drainage, underground utility services, fire, police, and other municipal equipment, and street lighting and other requirements where necessary in a subdivision; and for coordinating the ways in a subdivision with each other and with the public ways in the town, and with the ways in neighboring subdivisions.

1200. AUTHORITY.

These Rules and Regulations have been adopted under the authority vested in the Planning Board of the Town of Marion by M.G.L. c. 41, s. 81Q, as amended. The Planning Board shall be the agency responsible for the administration of the Rules and Regulations and shall have all of the powers assigned to it by M.G.L. c. 41, ss. 81K to 81GG, inclusive.

1300. APPEAL.

Any person, whether or not a party to the proceedings, aggrieved by any decision of the Planning Board concerning a plan of a subdivision or by the failure of the Board to take final action concerning such a plan within the required time, or any municipal officer or board, may appeal in accordance with M.G.L., c. 41, s. 81BB, provided that such decision has been recorded in the office of the Town Clerk or within twenty (20) days after the expiration of the required time as aforesaid, as the case may be, and notice of such appeal is given to the Town Clerk so as to be received within twenty (20) days. The Court shall hear all pertinent evidence and determine the facts and upon the facts so determined, shall annul such decision if found to exceed the authority of such board, or make such other decree as justice and equity may require. The foregoing

remedy shall be exclusive, but the parties shall have all rights of appeal and exceptions as in other equity cases.

## **SECTION 2000. GENERAL REGULATIONS**

### **2100. DEFINITIONS.**

For the purposes of these Rules and Regulations the following words or terms used herein are hereby defined or the meaning thereof explained, extended, or limited as stated in M.G.L. Ch. 41, s. 81L, as amended. Other terms or words or phrases not defined herein or in the Subdivision Control Law shall be construed according to the common and approved usage of the language, but technical words and phrases and such other terms or phrases as may have acquired a particular and appropriate meaning in law shall be construed and understood according to such meaning.

Abutter shall mean (a) an owner of land sharing a common property line with the owner of land referred to in a subdivision application and (b) an owner of land which is directly across a way from the frontage of said subdivision land.

Agent: One or more persons designated to represent the applicant before the Planning Board.

Applicant shall mean the owner of the land referred to in an application filed with the Planning Board, or the owner's duly authorized representative.

As Built Drawings: The drawings which show the construction of a particular structure or work as actually completed.

Board shall mean the Planning Board of the Town of Marion.

Building: A structure, or portion thereof, either temporary or permanent, having a roof or other covering forming a structure for the shelter of persons, animals and property of any kind. No trailer or mobile home shall be used as a building. The term "building" shall be construed as if followed by the words "or portion thereof."

Building Inspector: The municipal official specified in the Massachusetts State Building Code and the building code for the Town of Marion designated as such by the Board of Selectmen.

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 the majority of the members of the 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.

Common Open Space: A parcel or parcels of permanently protected land or an area of water, or a combination of land and water within the site designated and intended for the use and enjoyment of Town residents and/or residents of Flexible Development Housings. Common Open Space may contain such complementary structures and improvements as are necessary and appropriate to its use and enjoyment.

Definitive Plan: See Plan, Definitive.

Days: Refers to consecutive calendar days.

Drainage: The control of surface water within the tract of land to be subdivided.

Driveway: An improved access (other than a street) connecting between a street and one or more parking or lading spaces. Nothing in this definition is meant to preclude that access from being shared with abutting land by granting of a Right-of-Way to abutting land/lot owners. In neither case does it qualify as a way, as defined in “Private Way” or “Right of Way”, nor does it satisfy the frontage requirements for buildable lots.

Easement shall mean a right acquired by a public authority or other person for use or control of property for utility or other designated public purpose.

First Flush: The volume generated by the first 1.25 inches of storm water runoff. This first flush of runoff carries the majority of accumulated pollutants from impervious surfaces. The first flush treatment volume (V t) is determined by the following formula:

$$V t = (1.25 \text{ inches}) (I) (\text{Site Area})$$

Where, I is the percentage of impervious area divided by 100 for residential area, the percentage impervious area is obtained from the TR55 table “Runoff curve numbers for urban area”, “Residential district by average lot size.”

Frontage shall have the same definition as that used in the Zoning By-law.

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

Lot, Corner shall mean a lot which has legal frontage on both a public way and on a proposed subdivision way, and which shall be shown on a subdivision application and shall be considered a part of that plan.

Lot Area: The horizontal area of the lot exclusive of any way in a public or private way open to public usage. For computation of minimum lot area requirements, see Marion Zoning By-law.

Massachusetts DPW Standard Specifications for Highways, Bridges and Waterways shall refer to the latest edition with amendments.

Massachusetts General Laws Annotated or M.G.L. shall mean the General Laws of the Commonwealth of Massachusetts, Ter. Ed., with all additions thereto and amendments thereof. In the case of a rearrangement of the General Laws, any citation of particular sections herein set forth shall be applicable to the corresponding sections in the new codification.

Municipal Services shall mean sewers, surface water drains, and other private or public utilities including water pipes, gas pipes, electric lines, cable television lines, telephone lines, fire alarm lines, and their respective appurtenances.

Owner shall mean, as applied to real estate, the person (hereinafter defined) holding the ultimate fee simple title to a parcel, tract, or lot of land, as shown by the record in the appropriate Land Registration Office, Registry of Deeds, or Registry of Probate.

Park Strip: The area between the paved road, the property line or sidewalk/bike path.

Permanent Benchmark shall mean a permanent reference point with the elevation accurately established by stone bounds and referenced to the United States Coast and Geodetic Survey datum.

Person shall mean an individual, partnership, corporation, or two or more individuals or a group or association of individuals, having common or undivided interests in a tract of land.

Plan, Definitive: The plan of a subdivision as submitted to the Board for approval, to be recorded in the Registry of Deeds or Land Court when approved by the Board.

Plan, Preliminary: A plan of a proposed subdivision or re-subdivision of land of sufficient accuracy to be used for the purpose of discussion and review and meeting the requirements of the Subdivision Rules and Regulations.

Preliminary Plan: See Plan, Preliminary.

Private Way: See Way, Private

Probable Maximum High Ground Water: The Probable Maximum High Ground Water shall be defined as the greatest elevation above mean sea level at which ground water is expected to occur at any point on the site. This elevation shall be determined by direct observation of ground water in specific areas of the site and by comparison with ground water monitoring wells in the Town of Marion. The applicant shall estimate the ground water elevations utilizing accepted methods for calculating probable maximum ground water elevations such as the US Geological Survey method for estimating probable high ground water levels in Massachusetts.

Public Way: See Way, Public

Record Drawings: Equivalent to As-Built drawings.

Registered Mail: Refers to registered or certified mail

Right of Way: A strip of land owned by another but over which persons sharing the right of way have a right to pass and re-pass. Unless the strip meets the requirements of "Private Way", frontage on the way does not satisfy the requirement for buildable lots.

Roadway or Street shall mean that portion of way, or street layout which has been prepared and constructed for vehicular traffic.

Special Flood Hazard District shall mean the Special Flood Hazard District as established by the Marion Zoning Bylaw.

Secondary Street: See Street, Secondary

Storm Water Management Area: The portion of the property where physical storm water management activities are conducted (i.e., treatment, retention/detention, etc.). The area includes the space for the management activities and access for maintenance.

Street: An improved public way laid out by the Town of Marion, the Plymouth County Commissioners or the Commonwealth of Massachusetts, or a way which the Marion Town Clerk certifies is maintained by public authority as a public way, or a way in existence having, in the opinion of the Planning Board, sufficient width, suitable grades and adequate construction to accommodate the vehicular traffic anticipated by reason of the proposed use of the land abutting thereon or served thereby and for the installation of municipal services to serve such land and buildings erected to be erected thereon. A way shall not be a “Street” with respect to any lot which does not have appurtenant to it a recorded right of access to and over such way for vehicular traffic.

Street, Dead-end: A street, portion of a street or combination of streets in which accessibility is limited to a single means of ingress and egress. Any proposed street which intersects solely with a dead-end street shall be deemed to be an extension of the dead-end street. Dead-end streets and their extensions, if any, shall be measured between the sideline intersecting street and the center of the turn-around. For the purposes of this regulation, a cul-de-sac is a dead-end street.

Street, Local: A street that, in the opinion of the Planning Board, primarily serves abutting residences and is not intended to serve through traffic.

Street, Secondary: a street that, in the opinion of the Planning Board, primarily serves as a collector street for “Local Streets” or as a minor through traffic way and secondarily as access to abutting residences.

Subdivision shall mean “the division of a tract of land into two or more lots and shall include resubdivision, and, when appropriate to the context, shall relate to the process of subdivision or the land or territory subdivided; provided, however, that the division of a tract of land into two or more lots shall not be deemed to constitute a subdivision within the meaning of the subdivision control law if, at the time when it is made, every lot within the tract so divided has frontage on (a) a public way or a way which the clerk of the city or town certifies is maintained and used as a public way, or (b) a way shown on a plan theretofore approved and endorsed in accordance with the subdivision control law, or (c) a way in existence when the subdivision control law became effective in the city or town in which the land lies, having, in the opinion of the planning board sufficient width, suitable grades, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed use of the land abutting thereon or served thereby, and for the

installation of municipal services to serve such land and the buildings erected or to be erected thereon. Such frontage shall be of at least such distance as is then required by zoning or other ordinance or by-law, if any, of said city or town for erection of a building on such lot, and if no distance is so required, such frontage shall be at least twenty feet. Conveyances or other instruments adding to, taking away from, or changing the size and shape of, lots in such a manner as not to leave any lot so affected without the frontage above set forth, or the division of a tract of land on which two or more buildings were standing when the subdivision control law went into effect in the city or town in which the land lies into separate lots on each of which one of such buildings remains standing, shall not constitute a subdivision.” See G.L. c. 41, s. 81I.

Subdivision Control Law shall mean M.G.L. c. 41, ss. 81K to 81GG, inclusive, and any amendments thereof, additions thereto or substitutions therefore.

Town shall mean the Town of Marion.

Water Supply Protection District shall mean the Water Supply Protection District as established by the Marion Zoning By-laws and further described in Section 8.2 of the Marion Zoning By-law.

Way or Right of Way shall mean the full strip of land designated as a way, consisting of the roadway, and any planting strips or sidewalks. A way so designated shall be available only for such uses as are customary for ways in the Town, and shall not be available for any private construction such as buildings, fuel tanks, septic systems, fences, or walls.

Yard, Front shall mean land extending across the required width of the lot and lying between the street line of the lot and the nearest line of the building. The depth of the front yard shall be the minimum distance between the building and front lot line.

Zoning By-Law shall mean the zoning by-law of the Town of Marion.

## 2200. SUBMITTING, COMPLETING, AND WITHDRAWING APPLICATIONS.

2210. Application and Other Forms. Applicants shall submit either an Approval Not Required Plan Application, a Preliminary Subdivision Application, or a Definitive Subdivision Application, all of which shall be submitted as required herein. Other forms required to be submitted under these rules shall be specified by the Planning Board or its agent, and will normally be provided by the Planning Board or its agent. All plans and applications shall comply in all respects with the provisions of these Rules and Regulations, unless the Board authorizes a waiver therefrom in specified instances.

2220. Place of Submittal and Filing. The submittal of all applications for consideration by the Planning Board shall be completed by delivering all required application materials (including a copy of the notice filed at the Town Clerk’s office, date stamped by said office) to the agent of the Planning Board at the Planning Board office during office hours; or during a Planning Board meeting; and by filing the notice of said submittal at the office of the Town Clerk as required herein. The applicant must check with these offices to verify hours during which they will be

open. Application materials submitted to the Planning Board shall be the property of the Town and a copy of all application materials shall be retained by the Planning Board.

2230. Notice to Town Clerk of Submittal. Every person submitting an application to the Planning Board under these Regulations shall concurrently file written notice at the office of the Town Clerk by hand delivery or by registered mail, postage prepaid, that such application has been submitted to the Planning Board. Said notice shall describe the land to which the plan relates in sufficient detail for identification, shall state the date when such application was submitted to the Planning Board, and shall include the name, address and daytime telephone numbers of the property owner, and of the person making application if different from the property owner. A copy of the completed application form shall be filed with said notice at the office of the Town Clerk; and a statement that such notice to the Town Clerk has been made shall be included as part of any application to the Planning Board.

2240. Status of Applications. Within seven (7) days of the submittal date of an application, or within seven (7) days of any subsequent submittal date in response to a determination that any such application was incomplete, the Planning Board or its agent shall review said application and inform the applicant and the Town Clerk in writing as to whether said application is deemed complete and properly submitted. An application shall be deemed complete only if the applicant has provided all of the information required by these regulations, with the appropriate number of copies and in the appropriate format. If said application is determined to be incomplete or improperly submitted, the applicant shall receive written notice from the Planning Board or its agent listing the items or information needed for a complete and proper application. When the application is deemed complete and properly submitted by the Planning Board or its agent, it shall notify the Town Clerk in writing of the final submittal date.

The final submittal date shall be the date that the completed and properly submitted application is received by the Planning Board or its agent. For applications that have been deemed incomplete, the applicant must agree in writing to any new submittal date in order for any additional information nor material to be considered part of the original application.

2250. Withdrawing Applications. An applicant may withdraw a submitted application, without prejudice as to the rights set forth in G.L. Ch. 40A, s. 6 and G.L. Ch. 41, s. 81Q, by filing with the Planning Board and the Town Clerk a written statement of withdrawal. The applicant shall be responsible for all costs incurred by the Town in processing and reviewing said application up to and including the withdrawal, and shall not be entitled to a reimbursement of any fee paid.

2260. Responsibility for Information and Materials. By submitting an application or request under these Regulations, the applicant assumes responsibility for the accuracy and representations made or implied for all of the information and materials that constitute said application or request.

#### 2300. RELATION TO ZONING BYLAW.

2310. Conformance. The Board shall not approve or modify and approve any plan of a subdivision of land unless all lots and other aspects of such plan conform with the Zoning By-law of the Town or a variance from the terms thereof has been granted by the Board of Appeals.

2320. Issuance of Building Permits. The official in the Town authorized to issue building permits shall not issue any permit for erection of a building until first satisfied (a) that the lot on which the building is to be erected is not within a subdivision, (b) that a way furnishing the access to the lot within a subdivision as required by the subdivision control law is shown on a recorded plan and that any conditions endorsed thereon limiting the right to erect or maintain buildings on such lot have been satisfied, and (c) that all other applicable requirements have been met.

#### 2400. MODIFICATION, AMENDMENT, OR RESCISSION.

2410. Powers. The Board, on its own motion or on the petition of any interested person, shall have the power to modify, amend, or rescind its approval of a plan of a subdivision, or to require a change in a plan as a condition of its retaining the status of an approved plan, after due notice and opportunity to the owner to be heard in accordance with M.G.L. c. 41, s. 81W, as amended.

#### 2500. FEES.

2510. Professional, Legal, and Technical Assistance. The Board may assign as its agents appropriate Town officials, and may hire professional and legal technical experts to review plans and inspect improvements at the cost of the applicant.

2520. Appendix A. The fees indicated in Appendix A – Planning Board Fee Schedule – shall accompany the submittal of application materials of the various plans specified in the Rules and Regulations, to cover costs of processing, technical review, and inspection. No application shall be deemed submitted unless the appropriate fee accompanies said application. The fees shall be submitted by certified or bank check.

#### 2600. PLAN BELIEVED NOT TO REQUIRE APPROVAL.

2610. Submission. Any person who wishes to cause to be recorded in the Registry of Deeds or to be filed with the Land Court a plan of land and who believes that said plan does not require approval under the Subdivision Control Law, shall submit to the Board at a regular meeting said plan, seven (7) prints thereof, and two (2) copies of a properly executed Form A – Application for Endorsement of a Plan Believed Not to Require Approval, accompanied by the necessary evidence to show that the plan does not require approval. In order to be considered, the plan and Form 2A must be submitted to the Planning Board before noon of the Wednesday prior to the next regular meeting. The applicant shall also submit the fee as set forth in Appendix A – Planning Board Fee Schedule with the application form. Said person shall file, by delivery or registered mail, a notice with the Town Clerk stating the date of submission for such determination. The Board will review the plan to determine whether it is a subdivision and whether it conforms to the standards for endorsement.

2620. Required information. Said plan shall be of a minimum dimension of nine and one half inches by fourteen inches (9.5" x 14") but not to exceed a dimension of twenty four inches by thirty six inches (24" x 36"), drawn at a scale of one (1) inch equals forty (40) feet, and shall contain the following information:

2621. Identification of the plan by the name of the owner of record and the location of the land in question;

2622. The statement "Approval Under the Subdivision Control Law Not Required", and sufficient space for the date, and all signatures of the members of the Board;

2623. Zoning classification and location of any zoning district boundaries that may lie within the locus of the plan;

2624. In the case of creation of a new lot, the remaining land area and frontage of the land in the ownership of the applicant, if any;

2625. Notice of any decisions by the Zoning Board of Appeals, including but not limited to variances and special permits regarding the land or any buildings thereon;

2626. Names of abutters from the latest available Assessor's records unless the applicant has knowledge of any changes subsequent to the latest available records;

2627. Distance to the nearest permanent monument; contours at the scale of available topographical maps, or where applicable, contours at a scale sufficient to demonstrate that each lot has present vehicular access from the way serving the site;

2628. Location of all existing buildings, including setback and side and rear yard designations and any existing structures on any remaining adjoining land owned by the applicant and dimensions of yards relating to such structures;

2629. Location of any easement, or way, public or private, across the land, with a designation as to the use of the same.

2630. Denial of Endorsement. If the Board determines that the plan does not require approval under the Subdivision Control Law, or does not conform to the standards for endorsement hereunder, it shall within twenty one (21) 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.

#### 2700. ACCESS ADEQUACY REGULATIONS.

2710. General Plans shall be endorsed as not requiring approval under the Subdivision Control Law and subdivision plans shall be approved only if each building lot to be created by such plan has adequate access as intended under the Subdivision Control Law, M.G.L., c. 41, ss. 81K-81GG.

2720. Standards of Adequacy. Streets within a subdivision shall be considered to provide adequate access, if, and only if, said streets comply with the standards established in the Town's Subdivision Rules and Regulations. Ways providing access to streets within a subdivision shall be considered to provide adequate access where, prior to construction on any lots, applicant for subdivision approval assures that such access will be in compliance with the Subdivision Regulations for right of way width, pavement width, maximum grade, and sight distance requirements applicable to ways within a subdivision.

2730. Direct Access. A subdivision that has its main access to an existing way in adjoining Town, but has some of its lots within the geographical boundaries of the Town of Marion, must provide additional direct and exclusive access to a public way within the Town of Marion. This access shall serve as a means for the residents whose lots lie within Marion to be served by and to reach Marion Town services. The lots and ways that serve the lots within the Marion boundaries must meet all of the requirements of the Zoning By-laws and of the Subdivision Rules and Regulations of the Town of Marion.

No Building Permit for building on any of the lots within the Marion boundaries shall be issued until the way or ways connected directly to Marion ways are physically completed.

2740. Multiple Access. When a subdivision road is over five hundred (500) feet in length, or a subdivision contains more than thirty-five (35) homes, a second emergency access sufficient in construction and width (but not necessarily paved) to allow emergency vehicles must be provided.

2750. Obligations. The Board may require, as a condition of its approval of a subdivision plan, that the applicant dedicate or acquire and dedicate a strip of land for the purpose of widening access ways to a width as required in these regulations, above, and that applicant make physical improvements within such way or compensate the town for the cost of such improvements in order to meet the standards specified above.

2760. Waiver of Access Standards. The Board may waive strict compliance with these access regulations only upon its determination, following consultation with the Selectmen, Road Superintendent, Police Chief, or professional consultants, that the way in fact will be otherwise sufficient to serve the needs for access to serve potential uses of land abutting on or served by the way in question.

#### 2800. WAIVERS.

2810. General. Pursuant to M.G.L. c. 41, s. 81R, strict compliance with these Rules and Regulations may be waived when, in the judgment of the Board, such action is in the public interest, not inconsistent with the Subdivision Control Law, and promotes public health and safety. No waiver(s) shall be granted unless:

1. Application for a definitive plan hearing include in writing all requested waivers.
2. A listing of the above waivers and a brief description of them are included in the existing hearing notice.

3. The following procedure shall apply if an applicant requests further waivers: the hearing shall be continued so that one week's public notice of the continued hearing and additional waiver(s) can be given by a single legal advertisement in a local paper.
4. The reference to the Planning Board's waiver policy document in the original hearing notice shall be considered adequate public notice for any waiver(s) proposed by the Board itself at any time during the hearing process.
5. The nature of the waiver(s) requested and the reason(s) for granting or denying it shall be recorded as part of the Planning Board minutes.
6. Waiver(s) granted by the Planning Board shall be shown on the final plan submitted for approval.

2900. ONE DWELLING PER LOT.

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

## **SECTION 3000. PRELIMINARY PLANS, DEFINITIVE PLANS AND RESIDENTIAL COMPOUND PLANS**

### **3100. PRE-SUBMISSION REVIEW.**

Prior to investing in extensive professional design costs for preparation of subdivision plans, the applicant is invited to review the proposed development of the parcel of land with the Board, in order to explore general conditions involving the site and to discuss potential problems. Pencil sketches, which need not be professionally prepared, will assist in this discussion, and should show the critical features of a Preliminary Plan. In some cases, this pre-submission review may eliminate the need for the formal submission of a Preliminary Plan.

### **3200. PRELIMINARY PLAN.**

3210. Submission. A Preliminary Plan of a subdivision may be submitted and for any nonresidential subdivision shall be submitted by the subdivider to the Board and through the Board to the Board of Health for discussion and approval, modification or disapproval by the Board. The submission of such a Preliminary Plan shall be made of Form B – Application for Approval of a Preliminary Plan – and will enable the subdivider, the Board, the Board of Health, other municipal agencies, and owners of property abutting the subdivision to discuss and clarify any aspects of or problems with such subdivision before a Definitive Plan is prepared. For this reason, the Board strongly encourages the submission of such Preliminary Plans in every case. Seven (7) copies of the Preliminary Plan shall be submitted to the Board at a regularly scheduled meeting, together with the fee set forth in Appendix A – Planning Board Fee Schedule. Copies of the plan may be examined by the public during regular business hours of the Town Hall.

For subdivisions of eight (8) or more lots, two (2) subdivision plans shall be submitted at the Preliminary Plan stage: 1) a flexible development plan, and 2) a conventional plan. The subdivider is also strongly encouraged to consider submission of a plan for a Conservation Subdivision.

3220. Contents. The Preliminary Plan may be drawn on tracing paper with pencil, preferably at a scale of one (1) inch equals forty (40) feet, or other suitable scale acceptable to the Board, shall be clearly designated as “Preliminary Plan”, and shall show:

- a. subdivision name, boundaries, north point, date, and scale;
- b. name and address of record owner, applicant, designer, engineer, and surveyor;
- c. names of all abutters as determined from the most recent Town tax list;
- d. existing and proposed lines of streets, ways, easements, and public areas within the subdivision;
- e. location, direction, names, and streets, present widths of ways and public or private ways bounding, approaching, or within reasonable subdivision;

- f. location, names, and present widths of streets bounding, approaching, or near the subdivision;
- g. topography of the land in no greater than two (2) foot contours, including all resource areas as defined under 310 CMR 10.00 and all natural water courses, including vernal pools and salt marshes;
- h. proposed system of drainage, including existing natural waterways, in a general manner, but including drainage both within and adjacent to the subdivision;
- i. approximate boundary lines of proposed lots with approximate areas and dimensions;
- j. estimates of the grades of proposed streets or profiles, where required by the Board;
- k. major site features such as existing stone walls, fences, buildings, large trees and wooded areas, rock ridges and outcroppings, wetlands within 100 feet of the subdivision, perennial streams within 200 feet of the subdivision, and other water bodies;
- l. identification of any land area lying within five hundred (500) feet of any property valued under the provisions of M.G.L. c. 61A, as amended;
- m. adjacent natural resources;
- n. locus plat at an appropriate scale to locate the subdivision with the Town.

3221. The Preliminary Plan shall be accompanied by a statement of existing zoning, any easements, covenants, and restrictions applying to the area proposed to be subdivided, and a list of any waivers from these Regulations requested by the applicant.

3222. During discussion of the requirements set forth in Section 3220, the complete information required for Definitive Plan and the financial obligations of applicant will be addressed.

3230. Site Visit. After the regular Board meeting at which Preliminary Plan is first discussed, or a Definitive Plan submitted without prior Preliminary Plan, the Board and/or its agent may schedule a site visit to the proposed subdivision, accompanied by the applicant and his agents or representatives. In order to facilitate inspection and review of the site of the proposed subdivision, temporary staking will be required along the center line of all proposed roads in the subdivision before said site visit, or if impractical, the Board may permit a suitable alternative procedure.

3240. Decision. The Board shall, in conformance with M.G.L. c. 41, s. 81S, approve such Preliminary Plan with or without modifications, or disapprove such Preliminary Plan with reasons therefore.

3241. Approval of a Preliminary Plan, with or without modifications, does not constitute approval of a subdivision. Such approval does facilitate the final approval of a subdivision through submittal of a Definitive Plan.

3242. The Board shall notify the Town Clerk in writing of its decision on a Preliminary Plan in accordance with M.G.L. c. 41, s. 81S, as amended.

3243. The submission of a Preliminary Plan for examination by the Board shall not be deemed the submission of a Definitive Plan of a subdivision of land for approval by the Board under M.G.L. c. 41, s. 81L, and the action or decision of the Board as to such Preliminary Plan shall not prejudice its action or decision as to the Definitive Plan.

### 3300. DEFINITIVE PLAN

3310. Submission. A Definitive Plan of a subdivision may be submitted by the subdivider to the Board for review and approval, modification or disapproval by the Board. The submission of such a Definitive Plan shall be made on Form C – Application for Approval of a Definitive Plan. If the applicant for subdivision has chosen not to previously submit a Preliminary Plan, then for subdivisions of eight (8) or more lots, two (2) plans shall be submitted:

- a. flexible development plan; and
- b. a conventional plan

Any person submitting a Definitive Plan of a subdivision of land to the Board for approval shall file therewith the following:

- a. twenty (20) prints of the Definitive Plan, dark line on white background. Prints will be referred to town boards and departments for review;
- b. accompanying statements as required in Sections 3330 and 3340, below;
- c. one (1) properly executed Application Form and any other required forms on file with the Board (see Appendix C);
- d. the fee set forth in Appendix A, Application Fee Schedule.
- e. A certified list of abutters signed by the Board of Assessors with business sized envelopes, stamped and addressed to each abutter.
- f. A one page summary of the proposed project and a letter sized copy (8 ½ X 11) of the original drawing of the Definitive Plan of sufficient clarity for reproduction.

3311. The applicant shall file one (1) copy of the Definitive Plan and one (1) copy of the Application form with the Board of Health.

3320. Contents. The Definitive Plan shall be prepared by a Registered Professional Engineer and/or Land Surveyor, and shall be clearly and legibly drawn in black India ink upon tracing cloth D-r Mylar, and shall be 24" X 36" in overall dimensions with a one inch margin left on one 24" edge of each sheet for filing purposes. The prints shall be at a scale of not less than one (1) inch equals forty (40) feet, or such other scale as the Board may prescribe as adequate to show details clearly. Profiles of proposed streets shall be drawn to the same horizontal scale as the plan, and with vertical scale ten (10) times larger unless otherwise permitted by the Board, on separate tracing cloth or Mylar of the same dimensions as the plan sheets. If multiple sheets are used to show the subdivision, they shall be accompanied by an index sheet showing the entire subdivision. The Definitive Plan shall show the following information:

- a. a subdivision name, boundaries, north point, date, and scale;
- b. a locus map at a scale of one (1) inch equals one thousand (1000) feet showing the proposed streets in relation to existing streets in the immediate vicinity;
- c. name and address of record owner, applicant, and engineer or surveyor, with seal;
- d. where the owner or subdivider also owns or controls unsubdivided land adjacent to or directly across the street from the land shown on the Definitive Plan, the applicant shall submit a sketch plan showing possible or prospective street layout in the event that such unsubdivided land is developed, and shall also show the present drainage for such unsubdivided land, natural and constructed.
- e. boundary lines of bordering adjacent land or of land across the street from property being subdivided and names of abutters thereon as determined from the certified list of abutters;
- f. existing and proposed lines of streets, ways, easements, and any public or common areas within the subdivision.
- g. location, direction, names and present widths and grades of streets and public or private ways bounding, approaching, or within reasonable proximity of the subdivision;
- h. sufficient data to determine the location, direction, and length of every street and way line, lot line, and boundary line so as to establish these lines on the ground. The location of base lines and necessary data from which bearings and elevations may be determined may be furnished by the County Engineer's Office. Should the Town establish a coordinate system, all street corners must be tied into the nearest triangulation station. The relative error of closure of property line traverse shall not be less than one (1) part in twelve thousand (12,000). A signed statement to this effect shall appear on the engineer's tracing cloth drawing. A copy of traverse notes shall be furnished to the Board upon request.
- i. location and identification of all existing buildings and site features such as stone walls, fences, large trees and wooded areas, rock ridges and outcroppings, flood plain

areas, wetlands within 100 feet of the subdivision, perennial streams within 200 feet of the subdivision, and other water bodies, including depth of water and direction of flow within or adjacent to the proposed subdivision;

j. existing and proposed topography with two (2) foot contours based on mean sea level datum, or at a suitable interval as required by the Board. All buildings and physical features of abutting property that are within fifty (50) feet of the boundary must be shown.

k. acreage of each lot, lot lines, bearings and length thereof in conformity with the Zoning By-law in each case;

l. location of existing and proposed monuments, hydrants, public utility facilities, water pipes, fire ponds and cisterns, and wells within the subdivision;

m. park or open areas suitably located for conservation, playground, or recreation purposes within the subdivision, if any;

n. proposed storm drainage of land, including existing natural waterways and the proposed disposition of water from the proposed subdivision to either adequate natural drainage channels or artificial means of disposal thereof. Four (4) copies of a runoff plan and calculations using the rational formula (as described in Seelye's Design Data Book for Civil Engineers, latest edition), based on a ten year expectancy period, to determine the necessary pipe sizes which can be no less than twelve (12) inches in diameter. Roadways crossing brooks with a drainage area in excess of ten (10) acres shall be based on a twenty-five (25) year expectancy period. Pipe size, capacity, depth of flow and velocity of flow shall be included;

o. location and purpose of all existing and proposed easements;

p. location and species of proposed street trees, and/or individual trees or wooded areas to be retained within forty (40) feet of the sidelines of each street;

q. street plans and profiles must show the percent of grade, radii and length of curves, the point of curvature, and the point of tangency of curves;

r. street profiles on the centerlines and sidelines of proposed streets at a horizontal scale of one inch equals forty feet and vertical scale of one inch equals four feet, or such other scale acceptable to the Board. Profiles shall show elevation of sills of all existing structures. Present and proposed elevations must be shown at least every fifty (50) feet and must refer to the town base, mean sea level, if bench available within two thousand (2000) feet of subdivision. Profile plans of roadways and appurtenances shall be derived from "on the ground" topography. Profile plans shall show roadway cross-sections together with locations of proposed underground utilities including sanitary and storm sewer lines, water lines and their appurtenances, along with details of all structures, headwall, and retaining walls.

- s. approximate proposed location of principal building on each lot to comply with the provisions of the Zoning By-Law, whenever uncertainty exists or upon the request of the Board, the Board of Health, or the Conservation Commission;
- t. location of a minimum of three (3) benchmarks, located by State plain data;
- u. suitable space to record the action and signatures of the Board members on each sheet of the Definitive Plan in the lower right hand corner;
- v. location of existing utilities, underground or overhead, indicating size, type, and location of easement;
- w. an overlay at the same scale as the Definitive Plan showing the SCS interpretation of suitability for on-site sewage disposal, or showing the USGS surficial geology, or both. Board of Health sanctioned testing required under Title 5 (310 CMR 15.00) may be substituted for this overlay. Test pit logs for locations selected by the Planning Board and shown on one of the above overlays, with not more than one (1) pit per four (4) proposed lots, selected to reveal general patterns of subsurface characteristics, after consultation with the Board of Health and the Conservation Commission;
- x. where connection to the public water system is not proposed, information indicating why such connection is not feasible, description of provisions to be made for water for fire fighting, and information adequate to allow determination of compliance with these regulations regarding potable water quality and quantity;
- y. an Erosion and Dust Control Plan, indicating the erosion and dust control measures to be employed, including description of locations of temporary stockpiles, spoil areas, temporary drainage systems, slope stabilization techniques, sediment basins, etc., and narrative description of how dust is to be controlled and how erosion from individual lots onto streets and into drainage systems is proposed to be controlled and, in the case of subdivision of more than fifteen (15) lots, review comments on the Plan by the Conservation Commission and by the Soil Conservation Service or by others acceptable to the Board as expert in soil erosion;
- z. where located within the Special Flood Hazard District, base flood elevation (the level of the one hundred (100 year flood) data for proposals greater than five (5) acres;
- aa. an engineer's estimate of materials with quantities required to construct roadway, utilities and appurtenances for plan as submitted.

3330. Accompanying Statements and Data. The Definitive Plan shall be accompanied by four (4) copies of the following written statements:

- a. Existing zoning and any easements, covenants and restrictions applying to the area proposed to be subdivided.

- b. Logs of results of all test pits made.
- c. Data and proposed arrangements for water supply, sewerage, and sewage disposal, including all appurtenances, as required by the Board of Health.
- d. Drainage calculations prepared by the applicant's engineer, including design criteria, drainage area and other information sufficient for the Board to verify the size of any proposed drain, swale, drainfield, culvert, bridge, or catch basin. Said calculations are to be made separately for each drainage facility showing its location, the total upstream drainage area, the percentage of impervious surfaces in the drainage area, the runoff per acre, the design runoff, facility size, slope and capacity, and the velocity of water through it. Describe any areas subject to ponding or flooding, existing or proposed flood control or wetland easements, estimated increase of peak runoff caused by altered surface conditions, and methods to be used to return water to the soils.
- e. A complete list of any waivers requested from these Subdivision Rules and Regulations.
- f. Common Land and Ways: As part of the submission of a Definitive Plan, the applicant must state how he proposes to deal with any common land intended for the use of all residents of the development and all ways within the development. The applicant must elect one of the following options:
  - 1. Convey by deed to each owner singly and in total so that each owns to the center of the way abutting the owner's property and a share of any common land equal to the proportion that owner's land bears to the total land of all owners.
  - 2. Convey by deed to a perpetual trust established to be responsible for maintenance of all ways and common land.
  - 3. Petition the Town to accept the way(s). Election of this option shall require the selection of either Option 1 or 2 above to be implemented if the Town refuses to accept the way(s).

The option selected shall be recorded on the Definitive Plan and must be implemented before bond, surety or covenant covering improvements in the development may be released.

Evidence of compliance with this section shall consist of copies of deeds containing wording to implement one of the options for all lots sold up to the time release of bond, surety, or covenant is requested. Deeds for a minimum of twenty (20%) percent of all lots in the subdivision, but no less than two (2) lots, must be submitted to satisfy this requirement.

When driveways are shared by more than one lot, suitable permanent easements must be included in the deed for the lot for which the driveway passes, and this fact shall be included in the deeds of the other lots served by the driveway. Reference to these easements shall be shown on the Definitive Plan.

3340. Development Impact Statement (DIS). The impact of the proposed subdivision is to be described according to the following criteria, except that in the case of subdivisions containing twenty (20) or fewer units, the Board will normally waive some or all of these requirements. Unless this requirement is waived by the Board, the DIS shall be prepared by an interdisciplinary team including a Registered Landscape Architect or Architect, a Registered Professional or Civil Engineer, and a Registered Surveyor.

- a. Physical Environment.
  1. Describe the general physical conditions of the site, including amounts and varieties of vegetation, general topography, unusual geologic, archeological, scenic and historical features or structures, location of significant viewpoints, stone walls, trees over 16 inches in diameter, trails and open space links, and indigenous wildlife.
  2. Describe how the project will affect these conditions, providing a complete physical description of the project and its relationship to the immediate surrounding area.
  
- b. Surface Water and Subsurface Conditions.
  1. Describe location, extent, and type of existing water and wetlands, including existing surface drainage characteristics, both within and adjacent to the project.
  2. Describe any proposed alterations of shore lines, marshes, or seasonal wet areas.
  3. Describe any limitations imposed on the project by soil and water conditions and methods to be used to overcome them.
  4. Describe the impact upon ground and surface water quality and recharge, including estimated phosphate and nitrate loading on groundwater and surface water from septic tanks, lawn fertilizer, and other activities within the development. For subdivisions located in whole or in part within the Town's Water Supply Protection District, as established in the Zoning By-law, this shall include an analysis of drainage system alternatives, examining the concentration and speed of the transport of contaminants.
  5. Discussion of the stormwater management system beginning with the existing surface drainage patterns in the area of the site and downstream. This discussion shall be consistent with Section IV (F) of the Stormwater Management Section. It shall also provide a description of maintenance requirements and associated annual costs, for the stormwater management system.

The contents and submittal requirements shall be as described in Appendix B: Requirements for contents of Stormwater Management Plans and Section IV (F): Drainage.

- c. Circulation Systems.
  1. Explain the reasons for location of streets and intersections as shown on the Definitive Plan, with specific reference to criteria set forth in Section 4100, below.
  2. Project the number of motor vehicles to enter or depart the site per average day and peak hour. Also state the number of motor vehicles to use streets adjacent to the proposed subdivision per average day and peak hour. Such data shall be sufficient to enable the Board to evaluate (a) existing traffic on streets adjacent to or approaching the proposed subdivision, (b) traffic generated or resulting from the proposed subdivision, and (c) the impact of such additional traffic on all ways within and providing access to

the proposed subdivision. Actual study results, a description of the study methodology, and name, address, and telephone number of the person responsible for implementing the study, shall be attached to the DIS.

d. Support Systems.

1. Water Distribution: Discuss the types of wells proposed for the site, means of providing water for fire fighting, and any problems unique to the site.
2. Sewage Disposal: Discuss the type of system to be used, suitability of soils, procedures and results of percolation tests, and evaluate impact of disposal methods on surface and groundwater.
3. Refuse Disposal: Discuss the location and type of facilities, the impact on existing Town refuse disposal capacity, hazardous materials requiring special precautions.
4. Fire Protection: Discuss the type, location, and capacity of fuel storage facilities or other flammables, distance to fire station, and adequacy of existing fire fighting equipment to confront potential fires on the proposed site.
5. Recreation: Discuss the distance to and type of public facilities to be used by residents of the proposed site, and the type of private recreation facilities to be provided on the site.
6. Schools: Project the increase to the student population for nursery, elementary, junior high and high school levels, also indicating present enrollment in the nearest public schools serving these categories of students.
7. Description of proposed utilities (i.e., water, sewer, cable, telephone, electric and gas) including points and methods of connection and capacity of the existing system.

e. Phasing. Where development of the subdivision will require more than one (1) year, indicate the following:

1. Describe the methods to be used during construction to control erosion and sedimentation through use of sediment basins, mulching, matting, temporary vegetation, or covering of soil stockpiles. Describe the approximate size and location of portion of the parcel to be cleared at any given time and length of time of exposure.
2. Describe the phased construction, if any, of any required public improvements, and how such improvements are to be integrated into subdivision development.

3400. REVIEW OF DEFINITIVE PLANS.

3410. Board of Health as to Suitability of the Land. The applicant shall file with the Board of Health two prints of the Definitive Plan. The Board of Health shall, within forty-five (45) days after filing of the plan, report to the Board in writing and shall make specific findings as to which, if any, of the proposed lots shown on such plan cannot be used for building sites without injury to the public health, or is unsuitable because of drainage conditions. The Board of Health shall make specific findings and state reasons therefore in such report, and, where possible, shall make recommendations for the adjustment thereof. The Board of Health shall determine the extent of soil evaluation, which may include deep test holes, percolation tests, and test borings, and shall determine the number of tests to be required. At the time of the filing of the Definitive

Plan, the applicant shall stake all proposed lots and mark proposed lot numbers on said lots for identification to facilitate review by the Board of Health.

3420. On-site Wastewater Disposal. Notwithstanding Section 3410, a permit to construct an individual sewage disposal system for sanitary wastewater disposal shall be obtained from the Board of Health for each individual lot prior to the issuance of a building permit. A condition shall be recorded on the Definitive Plan as follows: “No building or structure shall be built or placed upon any lot without a permit from the Board of Health”, or words to this effect.

3430. Other Town Officials. Before approval of a Definitive Plan is given, the Board will obtain appropriate checks on the engineering and survey information shown on said plan, and written statements that the proposed improvements shown are laid out to the satisfaction of the official, as follows:

3431. As to the design of the street system, location of easements, and design of sewerage, water, and drainage systems, including appurtenances: the planning consultant or engineer designated by the Board;

3432. As to location, size, and species of street trees: the Tree Warden

3433. As to the form of easements, covenants, and performance guarantee: Planning Board Legal Counsel.

3434. As to location of hydrants, fire ponds and cisterns, and with regard to fire safety: the Fire Chief.

3435. As to street safety: the Police Chief.

3440. Public Hearing. Before approval, modification, or disapproval of a Definitive Plan is given, a public hearing shall be held by the Board. Notice of such hearing shall be given in accordance with the provisions of M.G.L. c. 41, s. 81T, as amended. A copy of said notice shall be mailed, by certified mail, to the applicant and to all owners of land submitted on Form D – Certified List of Abutters.

3450. Decision. After the public hearing, the Board in due course will approve, modify and approve, or disapprove the Definitive Subdivision Plan submitted. Criteria for action by the Board shall be the following:

3451. Completeness of submissions; and technical adequacy of all submissions;

3452. Determination that development at this location does not entail unwarranted hazard to safety, health and convenience of future residents of the development or of others because of possible natural disasters, traffic hazard, or other environmental degradation.

3453. Conformity with the requirements of Sections 3000 and 4000 herein, and the Zoning By-law;

3454. Determination, based upon the Community and Environmental Impact Statement (where submitted), that the subdivision as designed will not cause substantial and irreversible damage to the environment, which damage could be avoided or ameliorated through an alternative development plan.

#### 3500. RESCISSION OF PLANNING BOARD APPROVAL.

3510. Failure to Obtain Endorsement. The applicant's failure to obtain the endorsement of the Planning Board within six (6) months from the date of the approval of the Definitive Plan shall result in the automatic rescission of said approval.

3520. Failure to Construct. The applicant's failure to complete the construction of the ways, utilities, and services shown on the definitive plan within three (3) years from the endorsement of said plan shall result in the automatic rescission of the approval of said plan. Prior to the expiration of said three year period, applicant may request, in writing, an extension of one (1) year to complete the construction of the ways, utilities, and services shown on the definitive plan for good cause, which may be granted by the Planning Board upon the vote of a majority of its members then present and voting.

#### 3600. PERFORMANCE GUARANTEE.

3610. Final Approval with Bond or Surety. Before approval of a Definitive Plan, the subdivider shall either file a performance bond, or deposit money or negotiable securities in an amount determined by the Board, in accordance with the procedure set below, to be sufficient to cover the cost plus ten (10) percent of all or any part of the improvements specified herein, or follow the procedure set forth below. Letters of credit are not acceptable. Passbooks shall be accompanied by a form assigning same to the Town of Marion. A bond estimate may be requested by the Board; such estimate shall remain effective for 90 days. The estimate shall reflect the cost for the Town to complete work under adverse conditions which may necessitate legal fees, public bidding, and additional town staff time. Ordinarily the Board shall require an amount covering the total cost of construction of all roads and other improvements within and without the subdivision. Such bond or security if filed or deposited shall be approved as to form and manner of execution by the Planning Board Legal Counsel, and as to sureties by the Town Treasurer. Such bond or security shall be contingent on the completion of such improvements not later than three (3) years from the date of the endorsement of the Definitive Plan. Failure to so complete shall result in the automatic rescission of the approval of the definitive plan by the Board, unless the Board extends said period, for good cause shown, after the written request of the applicant prior to the expiration of said period.

3611. In determining the amount of the bond or surety, the Board shall be guided by the following formula in setting the sum of the security:

- a. the Board's estimate of the cost; plus

- b. a ten percent margin of error; plus
- c. an appropriate rate of inflation over a five year period.

3620. Final Approval with Covenant. Instead of filing a bond or depositing surety, the subdivider may request approval of the Definitive Plan on condition that no lot in the subdivision shall be sold and no building shall be erected thereon, until the improvements specified in Section 5 are constructed and installed so as to adequately serve said lot or lots. Such covenants shall be executed and duly recorded by the owner(s) of record, and shall run with the land. Proposed covenants shall be submitted with the Definitive Plan, and shall be approved as to form by the Town Counsel or Special Town Counsel. Such covenant shall state that the improvements shown on the Definitive Plan shall be completed not later than three (3) years from the date of the endorsement of the Definitive Plan. Failure to so complete shall result in the automatic rescission of the approval of the Definitive Plan by the Board, unless the Board extends said period, for good cause shown, after the written request of the applicant prior to the expiration of said period. Covenants and stated conditions therein shall be referred to on the plan and recorded in the Registry of Deeds. The subdivider shall promptly, after recording, send a copy of the covenant, showing book and page number, to the Board.

3630. Converting Covenant to Another Performance Guarantee. If the applicant desires that lots be released from a covenant and that the improvements remaining to be constructed or installed be secured by another form of performance guarantee, a formal written request shall be sent to the Planning Board by registered mail which sets forth and includes:

- a. The extent and scope of remaining work to be completed to satisfy the requirements for the construction or installation of all required ways and municipal services; and
- b. An estimate, pursuant to these Regulations, which reflects all remaining costs related to the construction of all required ways and installation of all required municipal services; and,
- c. The form and type of guarantee being given to the Planning Board to secure all remaining improvements.

The Planning Board or its agent will make a determination as to the sufficiency of the submitted estimate, and, if such estimate is accepted, a new performance guarantee will be given to the Planning Board. Upon acceptance by the Planning Board of the new performance guarantee, all applicable lots shall be released from the covenant.

3640. Converting Bond, Deposit, or Agreement to Covenant. If the applicant desires to secure by means of a covenant the construction of ways and the installation of municipal services in a portion of a subdivision for which no building permits have been granted nor any lots have been sold, and to have the Planning Board release the bond, deposit of money or negotiable security, or agreement and mortgage previously furnished to secure such construction and installation, the applicant shall submit to the Planning Board a reproducible tracing and three (3) contact prints of

the reproducible tracing of the definitive subdivision plan, limited to that part of the plan which is to be subject to such covenant. Upon approval of the covenant by the Planning Board, reference thereto shall be inscribed on such section of the plan, and it shall be endorsed by the Planning Board and recorded with the covenant at the expense of the applicant. Certified copies of all documents which the applicant records at the Registry of Deeds shall be provided to the Planning Board as set forth in these Regulations.

3650. Using Performance Guarantee in Case of Default. If the applicant fails to complete the construction and installation work to the satisfaction of the Planning Board and in compliance with all applicable agreements, plans, regulations, and specifications, the Planning Board shall be entitled to enforce any bond or to use any deposit or other securities for the benefit of the Town to the extent necessary to complete all such required work without delay. The performance guarantees shall be used to cover all costs to the Town of completing such construction and installation. The Town, at its option, may enter upon the premises of the subdivision and itself, or through others, supply whatever materials and perform whatever work it deems necessary to remedy such failure and complete all work called for to be performed by the applicant. If the performance guarantee posted by the applicant is not sufficient to complete the required subdivision improvements or to remedy any failure of installed improvements, the Town, at its option, may initiate proceedings to recover the additional costs necessary from the applicant to correct and complete all required work. The proceedings shall include an amendment to the approved subdivision plan in accordance with these Regulations to increase the amount of the performance guarantee. If the applicant does not provide the additional security, the Planning Board may initiate appropriate legal action to ensure compliance.

### 3700. ENDORSEMENT AND RECORDING.

3710. Certificate of Approval. The action of the Board with respect to any Definitive Plan shall be by vote, copies of which shall be certified and filed with the Town Clerk and sent by registered mail to the applicant. If the Board modifies or disapproves such plan, it shall state in its vote the reason for such modification or disapproval. Final approval, if granted, shall be endorsed on the original drawing of the Definitive Plan by the signatures of a majority of the Board, but not until the statutory twenty (20) day appeal period has elapsed following the filing of the certificate of the Board's action with the Town Clerk and said clerk has notified the Board that no appeal has been filed.

3711. After the Definitive Plan has been approved and endorsed, the applicant shall furnish the Board with eight (8) blueprints and the original thereof. The Planning Board upon receipt of the blueprints and the original shall send one (1) blueprint to each of the following Boards or Supervisors of the Town of Marion: Fire Department, Conservation Commission, Board of Health, Board of Assessors, Municipal Light Board, and Department of Public Works, and shall retain the original and two copies for its own files.

3712. Final approval of the Definitive Plan does not constitute the laying out or acceptance by the Town of streets within a subdivision.

3720. Recording of Plan. Within thirty (30) days after the return of an approved plan, the applicant shall cause to be recorded in the Plymouth County Registry of Deeds, and in the case of registered land with the recorder of the Land Court, a copy of the approved Definitive Plan and accompanying covenants and agreements, if any. Following plan approval, endorsement, and recording, the applicant shall provide the Board with five (5) prints of the Definitive Plan, one of which shall be certified by the Registry of Deeds as having been recorded, and one (1) copy of final covenants and restrictions, noting book, page number, and date of recording for each. One copy of the Definitive Plan shall be forwarded to the Building Inspector by the Board.

#### 3800. EVIDENCE OF SATISFACTORY PERFORMANCE.

3810. Submission. Before the Board shall finally release a performance bond or a deposit, or in the case of approval with covenants, issue a final release of a covenant, all held pursuant to Section 3500, above, the applicant shall:

3811. File with the Board a certified copy of the layout plan of each street in the subdivision marked "As Built". In the case of approval with covenants, the applicant may show only the street or streets serving the lots for which a release is desired on the layout plan. Certification shall be by a Registered Professional Engineer or Land Surveyor, and shall indicate that streets, storm drains, sewers, water mains, and their appurtenances have been constructed in accordance with said plan and are accurately located as shown hereon.

3812. Obtain and submit to the Board written evidence that the required improvements, as set forth herein, have been completed to the satisfaction of the official listed below:

- a. for the planting of any required street trees: Tree Warden;
- b. for the placing of monuments and construction of all other required improvements and the performance of all other required work; Planning Board and/or its designated agent;
- c. for streets, drainage and Storm Water Management, in conformance with the approved Definitive Plan: Planning Board and/or its designated agent;
- d. for underground wiring, water mains, sanitary sewers, storm sewers, hydrants, fire ponds, and fire alarms, as in conformance with the approved Definitive Plan: Planning Board and/or its designated agent.

3813. The applicant shall submit written evidence that all of the required improvements stated in Section 3812 have been in place twelve months without damage, or, if damage has occurred, that such damaged improvements have been repaired to the satisfaction of the Board.

#### 3900. RELEASE OF PERFORMANCE GUARANTEE.

3910. General. Upon completion of the improvements required under Section 3812, or the performance of any covenant with respect to any lot, the applicant shall send by registered mail to the Town Clerk a statement, in duplicate, that said construction or installation in connection with any bond, deposit, or covenant has been completed in accordance with the requirements of Section 4000. Such statement shall contain the name and address of the applicant, and the date of filing with the Town Clerk. The Town Clerk shall forthwith furnish a copy of the statement to the Board. If the Board determines that said construction or installation has been completed, in accordance with Section 3700 and Section 3800, above, it shall release the interest of the Town in such bond or deposit and return the bond or deposit to the person who furnished same, or issued a release of covenant in a form acceptable for recording. If the Board determines that said construction or installation has not been completed, it shall specify to the applicant in writing the details wherein said construction or installation fails to comply with the provisions of Section 4000. Upon failure of the Board to so notify the applicant within forty five (45) days after the receipt by the clerk of said statement, all obligations under the bond shall cease and terminate by operation of law, and deposit shall be returned, and any covenant shall become void. In the event that such forty five (45) day period expires without notification by the Board, or without the release and return of the bond, or the return of the deposit, or the release of the covenant, the Town Clerk shall issue a certificate to such effect, duly acknowledged, which shall be recorded by the applicant.

3920. Ways and Services. The Board shall release from covenants only those lots for which installation and construction of ways and services, including drainage facilities, have been completed, in accordance with these Rules and Regulations. The applicant shall submit the appropriate form when applying for the release of a lot from a covenant.

3930. Pavement. The Board shall not release any bond, deposit, or covenant nor shall a building permit be granted for any lot until the first course of pavement has been installed with manhole covers and other structures set therein at the level of such first course.

#### 3900A. RESIDENTIAL COMPOUND.

##### 3910A. Purpose.

The purpose of this Section III.G. is to provide qualified subdividers an option to develop a parcel of land under less stringent requirements, where, and only where, the Board determines that such alternative procedures will promote development of the parcel in the best interest of the Town, considering the factors specified in Section 3 below. The submittal of a Residential Compound Plan (RCP) shall be treated as the submittal of a Definitive Plan for the purposes of the Subdivision Control Law. The developer may, at his option, first submit a Preliminary Plan. The approval of a Residential Compound shall not be construed as denial of the right to subdivide the property, and the applicant shall retain all rights to submit a plan under Sec. II.B and III.B, herein. Applicants are advised to see Sec. 5.1, note 11, of the Zoning By-law for provisions regarding reduced lot frontage within a Residential Compound.

##### 3920A. Eligibility

Applicants for subdivision of land contained entirely within the Residence A, B, C or D Districts may request that their proposal be handled as a Residential Compound Plan. The requirements for development of a Residential Compound are less stringent than for a subdivision under Section 3300, herein. Prior to investing in extensive professional design costs for preparation of a RCP, the applicant is invited to review the proposed development of the parcel of land with the Board, in order to explore general conditions involving the site and to discuss potential problems. Pencil sketches, which need not be professionally prepared, will assist in this discussion, and should show the critical features described in Section 3940A below.

To qualify for consideration as a RCP, the subdivision must satisfy all of the following conditions; provided, however, the satisfaction of the following conditions shall only result in rendering the plan eligible for further consideration by the Board pursuant to Section 3930A, below, and does not guarantee approval.

- a. The RCP must create at least two (2) but not more than six (6) lots and have a minimum of one hundred (100) feet of frontage on an existing public way in Marion.
- b. All lots so created shall be accessed by a Common Private Way created herewith.
- c. Each lot shall have at least fifty (50) feet of frontage on the Common Private Way and shall contain one hundred fifty percent (150%) of the minimum area requirement for the district in which it is located; provided, however, that the contiguous uplands area required to compute such minimum lot area shall be based upon the minimum lot area requirement for the district in which the lot is located, and not upon the area of the actual lot.
- d. The Common Private Way shall extend from a Town of Marion approved or accepted public way, and shall end in a cul-de-sac, as described below.
- e. Not more than one (1) RCP subdivision shall be created from a property, or a set of contiguous properties held in common ownership as of date of enactment. Documentation to this effect shall be submitted to the Planning Board along with the application for RCP approval. No further division of the subject property shall be permitted after the creation of the RCP.
- f. A buffer zone of at least two hundred (200) feet in width of indigenous vegetation shall separate the structures in the development from any adjacent public way. No vegetation shall be removed from this buffer zone after the development of the residential compound, nor shall any building or structure be placed therein.

#### 3930A. Criteria for Planning Board Approval.

The Planning Board may approve a RCP subdivision upon a determination that the RCP as compared to an orthodox subdivision of the same parcel, is likely to:

- a. reduce the number of lots having egress onto existing public ways;

- b. reduce the number of lots having frontage on existing public ways;
- c. reduce cut and fill in road construction and subdivision development and reduce removal of indigenous vegetation.
- d. promote public safety and welfare, particularly with regard to traffic and pedestrian safety;
- e. be constructed in a manner which will minimize the visual impact of the development of the subject parcel of land as viewed from the public way providing access to the RCP subdivision, or from adjacent residentially zoned properties;
- f. produce less irregularly shaped or contorted lot configurations; or
- g. promote housing affordable to persons or families of low or moderate income, as defined by the standards and criteria of the Massachusetts Department of Housing & Community Development.

#### 3940A. Application

The Planning Board may request the submission of all of the information required for the submittal of a Definitive Plan. The Planning Board, however, may waive such requirements, after considering the factors specified in Section 2 and 3 above. In that event, any plan acceptable to the Registry of Deeds may be submitted, provided that on that plan or on separate documents, the following information has been provided:

- a. centerline profile of proposed Common Private Way;
- b. location of any wetlands;
- c. proposed drainage;
- d. proposed utilities and road construction design;
- e. proposed lot lines and building sites;
- f. scale and area of vegetative screening separating the Common Private Way and CO lots from adjacent public way.
- g. names of abutters from the latest available Assessor's records.

Such plan shall be prepared by a Registered Professional Engineer, Land Surveyor, Architect or Landscape Architect, unless this requirement is waived by the Planning Board.

#### 3950A. Filing Fee

A filing fee of \$1000 shall be submitted with the application form to cover costs of processing and initial engineering review. In the event that the Board determines that unusual or exceptional circumstances necessitate expert technical review that exceeds the cost of the filing fee, the cost of obtaining such expert technical review that exceeds the cost of the filing fee, the cost of obtaining such expert technical review shall be paid by the subdivider.

### 3960A. Conditions

Any plan approved as an RCP must contain or refer to recorded covenants regarding each of the following:

- a. the Common Private Way shall remain permanently a private way, which shall not be extended.
- b. the Common Private Way shall not be connected to any other way except where it originates on a public way.
- c. the lots shall obtain access from the Common Private Way if, and only if, ownership of the lot provides membership in an automatic membership homeowners association, in a form acceptable to the Planning Board, which association shall be responsible for all maintenance and snow removal of or from the Common Private Way. The homeowners association shall retain all rights in the Common Private Way.
- d. the Common Private Way does not meet the standard of the Town for acceptance for new ways and shall not be proposed for such acceptance.
- e. owners of lots in the RCP shall be subject to betterments for Common Private Way payable to the Town.
- f. the homeowners association shall indemnify, hold harmless and release the Town from liability for any damages resulting from any action brought by a third party or the association in any court due to the repair, use or maintenance of the Common Private Way.

### 3970A. Common Private Ways

Common Private Ways shall have:

- a. A staging area to promote ease of access from the Common Private Way to the abutting public way, and to provide for the proper discharge of water from the common private way onto the abutting public way. The staging area shall be at least forty (40) feet in length from the pavement on the public way, with a minimum width of eighteen (18) feet of pavement in accordance with the Subdivision Regulations, and sloped not more than four percent (4%) grade for the forty (40) feet it extends from the pavement on the public way.
- b. A centerline intersection with the street centerline of not less than sixty percent (60%).
- c. A roadway surface, on that portion of the Common Private Way extending beyond the staging area, of a minimum of six (6) inches of graded gravel, placed over a properly prepared base, graded and compacted to drain from the crown; provided, however, that the applicant may seek a waiver of this provision upon a demonstration that alternative construction standards meet the access and safety standards of this provision. Any subsequent change to the roadway surface after the construction of the RCP shall require a modification of the endorsed plan pursuant to M.G.L. c. 41, s. 81W.

- d. Proper drainage appurtenances, where required, to prevent washout and excessive erosion, with particular attention to the staging area to provide for the proper discharge of water from the common private way onto the abutting public way.
- e. A roadway surface, on that portion of the common Private Way extending beyond the staging area, with a minimum width of sixteen (16) feet for its entire length, and a minimum right of way width of twenty-five (25) feet for its entire length.
- f. A turnaround or cul-de-sac of not less than thirty (30) feet in depth and forty (40) feet in width provided at the terminus.
- g. A buffer zone of not less than thirty (30) feet in width of indigenous vegetation separating the Common Private Way from any pre-existing residential lot line.

#### 3980A. Processing and Decision

The Planning Board shall review a RCP in accordance with the procedures set forth in Section 3300. The Planning Board shall render a decision regarding a RCP in accordance with the provision of M.G.L. c. 41, s. 81U and Section 3300 herein. To the extent that the RCP is designed with lesser requirements for road width, right of way width, and the like, such lesser requirements shall be considered as waivers from the otherwise applicable requirements of Section 3300 for Definitive Plans.

**SECTION 4000. DESIGN STANDARDS**

**4100. STREETS.**

**1. Non-residential Subdivisions**

General criteria for non-residential subdivisions can be found in Section 9 of the Town’s Zoning By-laws.

**2. Residential Subdivisions**

General Criteria: The number of home sites used to determine the appropriate width of traffic lanes and sidewalks/bike paths shall be based upon the number of potential home sites serviced by the proposed road.

	Local Street	Secondary Street	Sidewalk (on one side)
Right of Way	50 feet	60 feet	
Traffic Lanes			
1-10 home sites	2 9 foot lanes	2 12 foot lanes	not required
11-20 home sites	2 10 foot lanes	2 12 foot lanes	required
21-30 home sites	2 11 foot lanes	2 12 foot lanes	required
Over 31 home sites	2 12 foot lanes	2 12 foot lanes	required
Paved Shoulders	none	2 6 foot shoulders	
Park Strips (min)	2 5 foot strips	2 6 foot strips	
Sidewalks/Bike Path	1 6 foot path	1 8 foot path	
Utility Strips (at sides of pavement)	2 1 foot strips	2 1 foot strips	
Maximum Gradient	8-10 percent	8-10 percent	
Minimum Horizontal Center Line Radius	200 feet	400 feet	

Notes:

- a. Greater width may be required by the Board where necessary to meet present or future traffic demands.
- b. Minimum gradient of any street shall be one (1) foot in one hundred (100) feet.
- c. Efforts shall be made to minimize the gradient of street by locating streets so that they follow contours rather than crossing contours. The gradient shall never exceed ten (10%) percent.

- d. Sidewalks and/or bicycle paths and curbs will be required only in areas of the Town where the Planning Board determines them to be necessary for public safety. Bike paths at the discretion of the Planning Board may be created by delineating a special lane on a paved way. “The centerline grade of the proposed road at any point shall be not more than five (5) feet above or below the existing centerline grade.”
- e. Cut or fill side slopes shall not be steeper than 3:1.
- f. All above-grade features, such as hydrants, utility poles, etc., shall be confined to the utility strip adjacent to the property line and are not to be placed in the park or green strip, no greater than forty (40) feet on center of both sides of the street.
- g. The number of curb cuts into the streets should be minimized by the use of common driveways serving more than one (1) lot. Such common driveways shall have at least a ten (10) foot width of traveled way with suitable additional spaces provided for vehicles to be parked on each lot without blocking the common driveway.
- h. All utilities shall be underground. Cable TV shall be included.
- i. “A one hundred (100) foot long leveling area shall be provided at all intersections. The leveling area will have a maximum slope of three percent (3%).
- j. Guard rails shall be installed where slopes from the right of way exceed 1:4 and the slope exceeds 5 feet in height, or where required by the Board to protect vehicles from obstructions or to maintain public safety.
- k. Where changes in roadway grade exceed one percent (1%), vertical curves shall be provided.

#### 4200. MISCELLANEOUS STANDARDS.

- a. All streets in the subdivision shall be designed so that in the opinion of the Board, they will provide safe vehicular travel.
- b. The proposed streets shall conform to the Master or Study Plan of the Town adopted in whole or in part by the Board.
- c. All dead end streets shall have a paved turning circle of one hundred eight (108) feet in diameter and a property line diameter of one hundred twenty (120) feet with curb radii of not less than thirty (30) feet at the entrance. The center of the circle shall be planted in low growing vegetative cover. The width of the paved portion shall equal one and one half (1.5) times the width of the traffic lane of the straight portion of the street.
- d. Street jogs with centerline offsets of less than one hundred twenty five (125) feet shall be avoided.

- e. Curves at intersecting streets shall have a tangent distance of not less than twenty (20) feet.
- f. All reverse curves on secondary streets shall have a minimum tangent between curves of one hundred (100) feet.
- g. Streets shall be laid out so as to intersect as nearly as possible at right angles. No street shall intersect any other street at less than seventy (70) degrees.
- h. Property lines at street intersections shall be rounded to cut back to provide for a curb radius of not less than twenty (20) feet.
- i. All roads shall be built such that the bottom of the gravel base lies above the probable maximum high ground water.
- j. Roads not yet released by the Planning Board from performance guarantee shall be maintained to standards acceptable to the Planning Board. Potholes in these roads must be repaired within two (2) months of their report to the Planning Board (from April 1 to November 1).
- k. No land may be stripped of all vegetation and left as bare soil without approved erosion control.
- l. A twenty-five (25) foot no disturbance vegetation buffer be maintained around wetlands, streams, ponds and vernal pools.
- m. No dead end street shall exceed 500 feet in length.
- n. Center line offsets for intersecting streets shall not be less than two hundred (200) feet.
- o. In all cases, the center line of the paved surface shall be coincidental with the center line of the right of way, unless specifically excepted by the Board.
- p. Sight distance requirements at intersections shall conform to the requirements of the procedures utilizing a 3.5 foot height observer and a 0.5 foot object.
- q. The roadway pavement shall consist of a four (4) inch thickness, after compaction, prepared and installed in conformity with Section 460 of the Massachusetts Department of Public Works Standard Specifications (hereafter referred to as MDPW Standard Specifications). The pavement shall be spread and rolled in two courses: a two and one half (2.5) inch thickness standard base course and a one and a half (1.5) inch thickness top course, in conformity with the Specifications aforementioned.

#### 4300. EASEMENTS.

1. Easements for utilities across lots shall be provided where necessary but, where practicable, shall be centered along rear or side lot lines and shall be at least twenty-five (25) feet wide.
2. Where a subdivision is traversed by a watercourse, drainage way, channel or stream, easements as required to meet the Conservation Commission's Order of Conditions shall be provided.
3. See Section 330.f, "Common Land and Ways", for easements covering common driveways.
4. A separate, numbered lot, upon which a detention/retention pond(s) is located and all easements on the other lots which are pertinent to said detention/retention pond(s) themselves, shall be held by a legal entity to be formed by the applicant-owner for the benefit of owners of lots within the subdivision. The documents describing the above legal entity, which shall hold the lots and easements, shall be reviewed by the Town Counsel and shall be subject to his or her approval. The applicant-owner shall execute such legal documents as are required to effectuate the conveyances above described. Maintenance of the detention/retention pond(s), including periodic dredging, shall be a responsibility incorporated in the above described document.

#### 4400. OPEN SPACES AND PROTECTION OF NATURAL RESOURCES.

Before approval of a plan, the Board shall also, in proper cases and in conformance with the most recently adopted Master Plan and Open Space Plan, require the plan to show a park or parks suitably located for recreational purposes. The park or parks shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of the land. The park shall be located on a separate lot under common ownership and shall be labeled as non-buildable.

No change shall be made in the contour of the land that adversely affects the land abutting the proposed subdivision.

All possible steps shall be taken to preserve all natural features, such as, but not limited to, desirable and mature trees and shrubs, water courses, scenic views and vistas, open space, historic spots, the habitat of species listed as rare, endangered, or of special concern by the Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement, Natural Heritage and Endangered Species Program, and similar community assets, which if preserved, will add attractiveness and value to the subdivision. It is the intent of the Planning Board with these provisions to preserve any especially large or unusual species of plants. Property within any Overlay District must meet the requirements of the District.

#### 4500. FLOOD PLAIN PROTECTION.

Within the flood plain area of the one hundred (100) year flood as shown on the map entitled "Flood Insurance Rate Map (FIRM), Town of Marion, revised February 17, 1988" or more recent updates hereby made part of these regulations and on file at the office of the Town Clerk, the following requirements shall apply:

1. All subdivision proposals shall be consistent with the need to minimize flood damage.

2. All public utilities and facilities shall be located and constructed to minimize or eliminate flood damage. All utilities shall be flood proofed so as to prevent short circuiting of electrical conduits, contamination of water supply by floodwater or contamination of water by sewage or other infiltration.
3. All roads built in the velocity zone shall be permeable and shall have a second means of egress that shall not lie within a velocity zone.
4. Lots shall be of sufficient area and of such shape and location so that anticipated new structures will be able to be safely sited within areas of each lot so that the lowest floor (including basement) is elevated to above the level of the one hundred (100) year flood.
5. Details of proposed grading and drainage shall be provided for all lots located in flood plain areas to ensure that flood protection is maintained and that flood damage is not increased in adjacent existing and proposed lots.
6. All public utilities and facilities shall be located, elevated and constructed to minimize or eliminate flood damage.

## 4600. STORMWATER MANAGEMENT.

### **1.0 GENERAL**

- 1.1 Management of stormwater runoff from all developments reviewed by the Marion Planning Board shall meet the standards and design criteria contained in this section for both flood control and non-point source pollution reduction. All assumptions, methodologies, and procedures used to design the stormwater management system components shall accompany all Site Plan Review and Subdivision of Land applications to the Planning Board.
- 1.2. Strict adherence to these Standards may be waived by the Planning Board upon a clear demonstration by the Proponent that full compliance with any specific standard would not serve the public interest or would not be practical due to physical site constraints.
- 1.3. All applicable standards of the Department of Environmental Protection (DEP) Stormwater Management Policy, dated March, 1997, amended January 2008, and all subsequent amendments thereto and the (DEP) Hydrology Handbook for Conservation Commissioners dated March, 2002 as amended from time to time, shall apply as minimum standards to all plan submittals, except where this section requires more stringent standards.
- 1.4 The applicant shall be responsible for compliance with the Marion Board of Health and Conservation Commission requirements governing the pertinent aspects of the stormwater management system.
- 1.5 Prior to the release of any portion of the Performance Guarantee, the stormwater management system must be substantially complete, stabilized, and operational. The functionality of the system shall be evaluated by the consulting engineer and the Superintendent of the DPW. The applicant shall submit an As-Built Plan of the constructed stormwater management system prepared by a Registered Land Surveyor and certified by a Registered Professional Engineer. If the system is found to be inadequate by virtue of physical evidence of operational failure even though it was built as called for in the Definitive Plan, it shall be corrected before the Performance Guarantee is released. Examples of inadequacy shall include errors in the infiltrative capacity, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from the basins.

### **2.0 PERFORMANCE STANDARDS**

- 2.1. All design and construction shall be done in a manner such that the post-development stormwater runoff will not exacerbate or create flooding conditions, or alter surface water flow paths, resulting in impacts to the receiving wetland resource area or any adjacent properties to the site for the 2, 25, and 100-year 24 hour

storm events. The pre-development standard shall be those conditions prevailing prior to abandoned projects or previously disturbed terrain.

- 2.2. The stormwater management systems shall be designed to attenuate the peak rate of the runoff for the 2-, 25-, and 100-year 24-hour storm events at or below the pre-development levels. Additional stormwater volume attenuation in excess of the Required Recharge Volume under the DEP Stormwater Policy for these storm events may also be required for any stormwater discharges into flood prone areas, off-site culvert inlets, isolated topographic depressions, adjacent properties ,and any receiving wetland and/or water body which may be sensitive to increases in runoff volume.
- 2.3. Stormwater management systems that may eventually be owned and maintained by the Town of Marion shall be designed and constructed to provide the required level of treatment at the least cost to the Town. The Planning Board, in conjunction with the Superintendent of the DPW, may, at its discretion, disapprove a plan due to what it considers to be excessive Operation & Maintenance (O&M) costs.
- 2.4. Stormwater management systems shall be designed and constructed so that they do not negatively impact groundwater quality or elevations adjacent to or down gradient of the system area. Upon review of the specific site conditions, the Planning Board may require a groundwater mounding analysis based on the Hantush Method and a groundwater water quality evaluation to determine the potential impacts to any adjacent sensitive receptors (i.e., drinking water supplies and basements of existing dwellings).
- 2.5. Stormwater management systems shall be designed and constructed so that they do not represent safety hazards or nuisances to public health as determined by the Planning Board in consultation with the Board of Health.
- 2.6. Stormwater management systems shall be designed and constructed so that they do not visually detract from the neighborhood. A landscape design shall be prepared that provides appropriate screening from the adjacent properties and roadways, while providing the degree of access necessary for O&M activities. Landscape plans shall be submitted that appropriately address visibility issues through proper placement, preservation of existing natural vegetation and supplemental plantings where necessary.

### **3.0. SUBMITTAL REQUIREMENTS**

- 3.1. All site plan and definitive subdivision submittals shall be accompanied by a Stormwater Management System Report. At a minimum the Report shall consist of the following:
  - 3.1.1 Hydrologic calculations for the 2-, 25-, and 100-year 24 hour storm events based on the TR-20 Methodology for the pre and post developed conditions for the overall project as well as specific calculations for the 2-,25-, and 100-year 24 hour storm events also based on the TR-20 Methodology for each specific are subject to flooding including but not limited to isolated depressions, culvert inlets, and ponding areas for the pre and post developed condition.
  - 3.1.2 Supporting water quality calculations, specific BMP sizing calculations, and a Stormwater Management Form stamped by a Registered Professional Engineer shall also be provided.
  - 3.1.3 Discussion of the environmental and hydrological conditions of the site for the pre and post developed condition, as well as the proposed alterations of the site, all proposed components of the stormwater management system and Low Impact Development (LID) consistency summation outlined in Section 4.8.3.
  - 3.1.4 Soil evaluation logs, permeability test results and predicted maximum groundwater levels at each component of the stormwater management system validated by a representative of the Board of Health and/or the Planning Board. On-site permeability tests may be required to determine the appropriate infiltration value from Table 2.3.3 of the DEP Stormwater Management Policy
  - 3.1.5 An Operation and Maintenance Plan for the stormwater management system. The Plan shall include a maintenance schedule for each component of the stormwater management system, an outline of responsible parties and owners, and all pertinent agreements to be executed to insure proper maintenance of the facilities.

- 3.2 Pre and Post Development Watershed Plans at a preferred scale of 1-inch equals 40 feet shall be submitted with the Stormwater Management System Report and shall clearly depict the following information:

**3.2.1 Pre-Development Watershed Plan**

- 3.2.1.1 The location of all surface waters, wetland resource areas, and all other State /Federal jurisdictional resource areas on or within 100-feets adjacent to the site.  
The boundaries of all such resource areas shall be verified to be accurate by the Marion Conservation Commission.
- 3.2.1.2 The delineation of the 100 year flood elevation as indicated on the Federal Emergency Management Act (FEMA) maps. If FEMA maps do not exist or if the 100-year flood elevation of the water body or watercourse is not indicated on the FEMA map, the elevation shall be calculated, utilizing the US Army Corps of Engineers HEC flood water modeling methodology or the SCS TR-20
- 3.2.1.3 Existing topography at a 2-foot contour interval within the watershed study area. Areas with less than a 1.0% grade shall be shown at a 1-foot contour interval with existing spot grades.
- 3.2.1.4. Delineation of the existing watershed boundaries on the property inclusive of all off-site areas contributing runoff to the property.
- 3.2.1.5. Boundaries of existing surficial ground cover conditions within the watershed study area in order to verify the runoff curve number (Cn).
- 3.2.1.6 Prevailing soil types on the site and the hydrological soil groups based on the most current Natural Resource Conservation Service soils map. The provisional soil mapping at the NRCS office in Wareham shall be used in place of the published 1967 Plymouth County mapping
- 3.2.1.7 Flow paths and design points for each watershed with each segment of the flow path defined.
- 3.2.1.8. Areas subject to flooding including but not limited to isolated topographic depressions, culvert inlets, and ponding areas with the calculated 100-year flood elevation associated with each area.
- 3.2.1.9. The location of any public or private water supplies on the property or within 100 feet of the property location including any mapped Water Resource Protection Overlays (i.e. Zone II, IWPA,)
- 3.2.1.10 Location of soil test pits and groundwater elevations.

**3.2.2 Post Development Watershed Plan**

- 3.2.2.1. Existing and proposed topography at a 2-foot contour interval within the watershed study area. Areas with less than a 1.0% grade shall be shown at a 1-foot contour interval with existing spot grades.
- 3.2.2.2 Delineation of the proposed watershed boundaries on the property inclusive of all off-site areas contributing runoff to the property.
- 3.2.2.3. Boundaries of proposed surficial ground cover conditions within the watershed study area including roadway areas, building footprints, driveways, lawn / landscaped areas and areas to remain in their natural condition in order to verify the runoff curve number (Cn).
- 3.2.2.4. Prevailing soil types on the site and the hydrological soil groups based on the most current Natural Resource Conservation Service soils map. The provisional soil mapping at the NRCS office in Wareham shall be used in place of the published 1967 Plymouth County mapping

- 3.2.2.5 Flow paths and design points for each watershed with each segment of the flow path defined.
- 3.2.2.6. Areas subject to flooding including but not limited to isolated topographic depressions, culvert inlets, and ponding areas with the calculated 100-year flood elevation associated with each area as a result of development in the watershed.
- 3.2.2.7 Location of soil test pits, permeability tests, and groundwater elevations for each component of the proposed stormwater management system.
- 3.2.2.8 The proposed development layout including the locations of roadways, parking areas, limits of land alteration, undisturbed areas, State / Federal jurisdictional wetlands, floodplains, drainage collection systems and stormwater management facilities.

## **4.0     DESIGN CRITERIA**

### **4.1     General**

- 4.1.1 The criteria presented herein are provided to assist the designer by identifying minimum requirements, general procedures to be followed as well as specifying any limitations regarding the types of systems to be allowed. The designer is responsible for ensuring that the design complies with the Performance Standards enumerated in Section 2.0 above as well as conformance with state and federal requirements and with accepted engineering practice.
- 4.1.2 All runoff from storms up to the 100-year storm event must flow through the stormwater management / treatment systems. Systems for the proper conveyance of the predicted 100-year storm to the stormwater management / treatment systems shall be provided.

### **4.2     Location**

- 4.2.1 Storm-water management systems (exclusive of the conveyance system) shall be located on a separate and segregated parcel specifically designated for such use, to be conveyed to the Town should Town acceptance of the subdivision roadway and infrastructure be contemplated. Provisions for vehicular access shall be provided at the circumference of each system. Components of the collection system such as drainage piping, ditches, swales, and certain LID components etc. may be located within Access / Utility Easements. Provisions for vehicular access shall be provided along the entire length of storm drain lines and swales within all designated Access / Utility Easements.
- 4.2.2 The following minimum setback requirements shall apply to all stormwater management systems. Any of these setback distances may be waived by the Board upon a clear finding that the proposed stormwater management system will utilize the preferred LID structural stormwater best management practices on a LID scale through decentralization and dispersion.

Property Line .....	25-feet
Street Line .....	50-feet
Underground Utilities .....	20-feet
Private Well .....	100-feet
Subsurface Sewage Disposal System .....	100-feet
Dwelling ...	100-feet
Surface Water Body .....	50-feet
Bordering Vegetated Wetland .....	25-feet

### **4.3     Soil Testing**

- 4.3.1 Soil testing to determine the maximum groundwater elevation and soil profiles shall be performed by a Massachusetts approved Soil Evaluator or Certified Soil Scientist and verified by the Board of Health and/or a representative of the Planning Board. At the discretion of the Board, soil permeability testing may be required if the initial soil logs exhibit variable soil conditions and inconsistent groundwater profiles.

- 4.3.2 Subsurface investigations for infiltration practices are required to define the suitability of soils for subsurface disposal of stormwater runoff. These explorations are necessary to determine the textural characteristics of the various soil strata, restricting layers, location of the seasonal high water table elevation and depth to bedrock in the location of the proposed system.

The soil investigation must include an identification of the soil through examination of the soil profile in the location of the proposed system. In addition, the following determinations must be included in the investigation:

- a. Soil textures, measurement of soil permeability rates, soil hydrologic group, estimation of seasonal high water table elevation by identifying soil gleying and mottling, and identification of any restricting layer(s).
- b. Acceptable testing methods to determine the soil suitability for infiltration practices are the Falling Head Permeameter Test (ASTMD5126-90) or the Double Ring Infiltrometer (ASTM D3385-03 / D5093-02). Soil test pits shall be excavated to a depth no less than 5 feet below the design bottom of the system or to the static water level, to inspect and describe the soil profile. A minimum of one inspection pit must be dug per 5,000 square feet of system bottom area and must be located within the perimeter of the system.

- 4.3.3 The infiltration values utilized in the TR-20 calculations to determine the size of the infiltration structure shall be based on the DEP Stormwater Management Policy Volume 3 Chapter 1 Recharge Requirements Table 2.3.3.

#### **4.4 Calculations**

- 4.4.1 Rainfall data shall be as determined from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 dated September 30, 2015 providing precipitation data for New England and New York or the document with the most recent date.
- 4.4.2 The use of the Rational Method for volume related calculations is not permitted
- 4.4.3 In areas where the actual on-the-ground soil evaluations exhibit subsurface conditions inconsistent with the NRCS mapping, or in cases where the site has been extensively reworked, the hydrologic soil group (HSG) curve number (CN) values utilized in the TR-20 calculations should be adjusted to reflect the actual on-the-ground cover conditions based on the determination by the Massachusetts approved Soil Evaluator or Certified Soil Scientist.
- 4.4.4 The analysis points for the hydrologic study shall be at the edge of the wetland resource area boundary, adjacent property line, existing storm drain system, or other sensitive receptors such as adjacent agricultural uses. For each pre-development analysis point there shall be a corresponding post-development point.
- 4.4.5 For all infiltration facilities, a groundwater mounding analysis based on the Hantush method for the required design storms shall be prepared by a Professional Engineer or Hydrologist. The applicant shall assess the potential effects from the subsurface disposal of stormwater on adjacent road surfaces, private wells, building foundations, embankments and any other site features that may be sensitive to groundwater flow.
- 4.4.6 The sediment forebay volume below the elevation of the spillway to the detention / retention stage cannot be utilized as available flood storage volume or recharge volume for purposes of sizing the detention / retention basin.

#### **4.5 Treatment Required**

- 4.5.1 The discharge of untreated stormwater runoff from the developed areas of the property is prohibited.

- 4.5.2 Stormwater management systems shall be designed to treat the first flush volume of the entire project site at full build out and shall achieve an 80% TSS removal rate of the total suspended solids at the point of discharge. The first flush volume is a function of the initial 1.25 inches of stormwater runoff from impervious surfaces. The first flush treatment volume in cubic feet ( $V_t$ ) is determined by the following formula:

$$V_t = (1.25/12 \text{ inches})(R_v)(\text{Site Area in square feet})$$

where  $R_v = 0.05 + 0.009(I)$  and  $I$  = the % impervious area. Impervious area is defined as any manmade cover that is not vegetated.

- 4.5.3 Any development in the Sippican Harbor and Wings Cove watershed areas shall incorporate a physical treatment processes to remove nitrogen at a minimum efficiency rate of 40%. Development in the Mary's Pond watershed shall incorporate phosphorus removal at a minimum design rate of 50%.

#### 4.6 Above Ground Basins

- 4.6.1 All water quality basins/ponds shall have a sediment forebay consisting of a separate cell separated from the detention / retention stage by a rock fill filter berm to allow lateral flow into the lower stage. The top elevation of the filter berm shall be at or below the elevation of the inlet piping.
- 4.6.2 A gravel access drive not less than 12-feet wide shall be provided around the outer perimeter of all basins to allow for vehicular access.
- 4.6.3 The maximum depth of the sediment forebay shall be no greater than 2-feet.
- 4.6.4 Where appropriate, the interior side slopes of all basins shall be no greater than 4:1 but in no case less than 3:1. Exterior side slopes of the embankment shall be no greater than 3:1.
- 4.6.5 The bottom elevation of the basin shall be no less than 2-feet above the maximum groundwater table elevation or bedrock and shall be at least 1-foot above the elevation of the receiving wetland.
- 4.6.6 The calculated peak water levels within the basin for all design storms shall be no greater than 3-feet and shall be no less than 12-inches below the elevation of the containment berm.
- 4.6.7 The entire detention basin area shall be treated with a 4-inch layer of screened organic soil borrow conforming to Massachusetts Highway Department (MHD) Specifications M1.07.0. The side slopes shall be seeded with an erosion seed mix conforming to MHD Specifications M6.03.1. The basin bottom shall be seeded with a New England Erosion Control / Restoration Mix as manufactured by New England Wetland Plants, Inc. or approved equal, applied at a rate of 35 lbs/acre and supplemented by landscape plantings. Infiltration basins shall be treated with 4-inch layer of screened organic soil borrow conforming to Massachusetts Highway Department (MHD) Specifications M1.07.0 and planted with a water tolerant grass seed mix.
- 4.6.8 The maximum allowable ponding or storage time for infiltration basins for design storms up to the 25-year storm event is 48-hours. For the 100-year storm event, the maximum drain time shall be 72-hours.
- 4.6.9 The bottom elevation of the infiltration basin shall be no less than 2-feet above the maximum groundwater table elevation or bedrock and shall be at least 1-foot above the elevation of the receiving wetland.
- 4.6.10 Infiltration basins may be constructed in fill providing that a minimum 4-foot layer of naturally occurring soil meeting the infiltration requirements of this section is available below the bottom of the basin and that the fill material is a clean granular fill conforming to 310 CMR 15.255(3.). Construction in fill shall mean any system where fill is required to replace topsoil, subsoil, peat, or unsuitable soil layers above the requisite 4-feet of naturally occurring soil.
- 4.6.11 Recharge structures shall be provided at the bottom of the infiltration basin to ensure adequate recharge is provided under frozen ground cover conditions.

- 4.6.12 All infiltration basins must be provided with an overflow mechanism to a receiving wetland or waterbody. Access / Utility Easements must be provided along the designated overflow path to the receiving wetland or waterbody. All infiltration basins must have an outlet structure with an accessible flap valve to allow manual drainage of the basin in an emergency condition, non-erosive flows at the outlets, inlet splash pads and emergency spillway weirs. Outlet structures and all inlet and outlet piping 18-inches or greater in diameter shall be fitted with trash racks.
- 4.6.13 Infiltration practices are limited to soils in Hydrologic Soil Group A , B and C only, as identified by the most recent NRCS Soil Survey Mapping The provisional soil mapping at the NRCS office in Wareham shall be used in place of the published 1967 Plymouth County mapping. Drywells for individual residential dwellings and small LID technologies such as rain gardens, bio retention cells and infiltration strips may be permitted in Hydrologic Soil Group C soils providing the minimum infiltration rate of 0.50 inches per hour can be achieved.
- 4.6.14. Detention and infiltration basins may not be located within the VE Zone as depicted on the map entitled, "Flood Insurance Rate Map, Town of Marion", which is in effect at the time of application.

#### **4.7 Subsurface Recharge Systems**

- 4.7.1 Subsurface recharge systems may be used on subdivisions consisting of five (5) lots or less, commercial and industrial site developments. All infiltration systems including above ground basins and subsurface recharge must be provided with a pretreatment system capable of removing 80% of the Total Suspended Solids (TSS) loading from the contributing watershed area. Subsurface recharge systems are not allowed on residential subdivisions in excess of five (5) lots or land uses with a high potential pollutant load as defined in the DEP Stormwater Management Policy.
- 4.7.2 Infiltration practices are limited to soils in Hydrologic Soil Group A, B and C only, as identified by the most recent NRCS Soil Survey Mapping The provisional soil mapping at the NRCS office in Wareham shall be used in place of the published 1967 Plymouth County mapping. Drywells for individual residential dwellings and small LID technologies such as rain gardens, bio retention cells and infiltration strips may be permitted in Hydrologic Soil Group C soils providing the minimum infiltration rate of 0.50 inches per hour can be achieved.
- 4.7.3 The bottom elevation of the subsurface recharge system shall be no less than 2-feet above the maximum groundwater table elevation or bedrock.
- 4.7.4 The maximum allowable ponding or storage time for recharge systems for design storms up to the 25-year storm event is 48-hours. For the 100-year storm event, the maximum drain time shall be 72-hours.
- 4.7.5 Subsurface recharge systems may be constructed in fill providing that a minimum 4-foot layer of naturally occurring soil meeting the infiltration requirements of this section is available below the bottom of the basin and that the fill material is a clean granular fill conforming to 310 CMR 15.255(3.). Construction in fill shall mean any system where fill is required to replace topsoil, subsoil, peat, or unsuitable soil layers above the requisite 4-feet of naturally occurring soil.
- 4.7.6 Subsurface recharge systems located under paved parking areas shall be designed to an H-20 vehicle loading.
- 4.7.7 The entire area of the proposed subsurface recharge system shall be roped off during construction to prevent compaction of the underlying soils by heavy equipment. The basin shall be excavated with light earth-moving equipment to prevent compaction of soils beneath the basin floor or side slopes. Light earth-moving equipment does not include bulldozers or standard size pay loaders.
- 4.7.8 Proper soil erosion and sediment control methods must be used during and after development of the site. Stormwater runoff shall not be allowed into any infiltration basin or recharge structure until the entire contributing watershed area has been stabilized with vegetation and other soil erosion and sediment control techniques.

- 4.7.9 Under no circumstances shall any infiltration basin or subsurface recharge system be utilized as temporary sediment traps or stormwater management during construction.
- 4.7.10 Subsurface recharge systems shall consist of precast concrete or HDPE galleys, or large diameter perforated HDPE pipe. The systems shall be encompassed with a 0.75-inch to 1.5-inch double washed stone conforming to 310 CMR 15.247(1) and wrapped in filter fabric. An individual recharge system for each catch basin inlet or pair of inlets is preferred over a single recharge facility serving multiple inlets. Direct connections from the catch basin inlets to the recharge systems are not permitted. Proprietary treatment systems may be considered in order to satisfy the TSS removal target prior to discharge into the subsurface recharge system.
- 4.7.11 For each line of subsurface galleys or trenches, a minimum of two inspection manholes for access and maintenance shall be provided at opposite ends of each line. The maximum length of each trench / galley line shall not exceed 50-feet. Multiple trench / galley lines shall be separated by a distance not less than 3 times the effective width or depth, whichever is greater.
- 4.7.12 Individual recharge systems shall be interconnected with an overflow pipe to a down gradient outfall device to prevent flooding of the roadway and adjacent properties in the event the design storm is exceeded or hydraulic failure of the infiltration structure.

#### **4.8 Low Impact Development Techniques**

4.8.1 Low Impact Development (LID) Techniques to manage stormwater shall be considered for new construction / redevelopment of all commercial and industrial site development projects and residential projects. Designs that reduce impervious surfaces and employ decentralized stormwater management systems that involve the use of small treatment and infiltration devices throughout the site in place of a centralized system of closed pipes and a single large facility are preferred.

4.8.2 Effective low impact development includes the use of both non-structural and structural stormwater best management practices (LID-BMPs). The use of these BMPs is governed by certain principals, objectives and requirements. The maximum practical use of the following seven non structural strategies shall be considered:

- a. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss.
- b. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces through the use of vegetative filter strips and buffers.
- c. Minimize the decrease in the pre-construction time of concentration.
- d. Minimize land disturbance activities including clearing and grading and preserve naturally vegetated areas.
- e. Provide low maintenance landscaping that promotes retention and planting of native vegetation and minimizes the use of lawns, fertilizers, and pesticides.
- f. Provide vegetated open channel conveyance systems which discharge into and through stable vegetated filter strip areas.
- g. Provide preventative source controls.

4.8.3 The applicant shall prepare a Low Impact Development (LID) Consistency Statement in which the above strategies have been incorporated into the developments design in the Stormwater Management Report. For each of the above strategies that were not able to be incorporated into the design due to physical site constraints, engineering, environmental, or safety reasons, the applicant must provide a basis for this contention.

4.8.4 Preferred structural stormwater best management practices such as rain gardens, bioretention areas, sand filters, and infiltration strips provide storage, infiltration, and treat

runoff close to its source. Other standard best management practices such as drywells, infiltration systems, surface and subsurface detention basins can all be done at an LID scale by downsizing and addressing stormwater runoff close to its source and dispersing these systems throughout the development site.

- 4.8.5 Commercial and industrial site development projects shall provide preventative source controls to prevent pollutants from being part of the stormwater runoff. Source controls such as the prevention and containment of spills and other harmful accumulations of pollutants as well the management of trash and debris shall be incorporated into all commercial and industrial site development plans.

#### **4.9 Proprietary Treatment Devices**

- 4.9.1 A proprietary treatment device is a prefabricated stormwater treatment structure utilizing settling, filtration, absorptive/adsorptive materials, vortex separation, and/or other appropriate technology to remove pollutants from stormwater runoff.
- 4.9.2 These devices are allowed for new construction and redevelopment projects on privately owned commercial /industrial land development sites. The operation and maintenance of these proprietary treatment devices will be the obligation of the owner of the facility being served. These devices may also be considered on real estate subdivisions upon a clear finding by the Board that no other practical alternative is available to achieve the water quality treatment goals of these Rules and Regulations.
- 4.9.3 On-line devices must be fitted with an overflow bypass for storm events exceeding the stormwater quality design storm.
- 4.9.4 The specified devices shall be furnished by a manufacturer regularly engaged in such work and who has furnished similar installations in the Commonwealth of Massachusetts and had them successful and continuous operation for a minimum period of five (5) years. Devices which have been evaluated and assigned a TSS removal efficiency by the DEP through the Massachusetts Strategic Envirotechnology Partnership (STEP) program are approved for use in the Town of Marion. Other proprietary technologies will be evaluated by the Board on a case by case basis in accordance with the DEP Technical Guide for Compliance with the Massachusetts Stormwater Management Standards Volume 2 – Chapter 4.
- 4.9.5 Manufacturers' documentation on similar systems including but not limited to data on performance testing, service history, TSS removal efficiency, sizing criteria, and operation / maintenance requirements of the specified devices shall be submitted to the Planning Board.
- 4.9.6 Approval of proprietary devices will be based on the following:
  - a. Optimal TSS removal efficiency.
  - b. Minimal operation and maintenance costs
  - c. Compatibility with existing infrastructure, other BMP devices and physical site constraints.
  - d. Frequency of maintenance and special handling or installation techniques.
  - e. Special equipment required for maintenance and the capability of the Department of Public Works to provide maintenance service.
  - f. Reliability of performance data and potential failure rates.

### **5.0 GENERAL LANDSCAPING GUIDANCE**

- 5.1 All submittals shall be accompanied by a Stormwater Management System Landscaping Plan prepared by a Landscape Architect Registered in the State of Massachusetts. At a minimum the Landscaping Plan shall consist of the following:
- 5.1.1 Plan views of each stormwater management system with detailed planting locations identified by specie and count. The wetted hydrologic zones within and around the basins should be identified and noted on the plan views. The planting species should be selected based on the frequency and depth of inundation within the hydrologic zones.
  - 5.1.2 A detailed planting schedule table identifying the size and type of species planted and individual plant counts.
  - 5.1.3 Notation specifications describing the site preparation activities, soil amendments, and procedures for plant installation. Specifications should also address the type of materials (e.g. balled and burlap, bare root, containerized); time of year installations, sequence of installation of type of plants; fertilization, stabilization seeding, watering and general care.
  - 5.1.4 Maintenance program consisting of inspection intervals, mulching frequency; removal and replacement of dead and diseased vegetation, watering schedule, repair and replacement of staking and wires; removal and eradication of invasive species.

## 5.2 Planting Plan Design Considerations

- 5.2.1 Native plant species are preferred over exotic or foreign species because they are well adapted to local on-site conditions and require little or no soil amendments. Existing natural vegetation is to be preserved where possible and enhanced with native plant species. Plantings requiring routine or intensive chemical applications are not permitted.
- 5.2.2 Appropriate plantings should be selected based on the zones hydric tolerance. Planting locations should be random and consistent with the surrounding native vegetation.
- 5.2.3 Trees, shrubs and/or any type of woody vegetation are not allowed on basin embankments. Herbaceous embankment plantings should be limited to 10-inches in height. Trees and shrubs should be planted at least 25 feet away from any perforated pipes and principal spillway structures. Trees and shrubs known to have long taproots should not be planted within the vicinity of any earth embankments or subsurface drainage facilities.
- 5.2.4 Inflow and outflow channels and southern exposure areas of any permanent pool areas should be shaded to reduce thermal warming.
- 5.2.5 Aesthetics and visual characteristics should be a prime consideration in the landscaping plan. Desirable views should be framed and maintained while unattractive views should be effectively screened from any adjacent residences and roadways.

## 6.0 STORMWATER COLLECTION SYSTEMS

### 6.1 Design Criteria

- 6.1.1 The quantity of storm-water carried by storm drains shall be determined by the Rational Method on the basis of a twenty five (25) frequency design storm. The inlet capacity and spacing for catch basins shall be designed to limit the flow in the gutter during a twenty-five (25) year design storm to a maximum of four (4) feet in width as calculated utilizing methodologies described in "Drainage of Highway Pavements, Hydraulic Engineering Circular No. 12, as published by the U.S. Department of Transportation, Federal Highway Administration. In any event, water shall not be allowed to run for more than three hundred

(300) feet on paved surfaces. Computations for drainage requirements shall be prepared by a Registered Professional Civil Engineer and submitted with the Definitive Plan.

- 6.1.2 Supporting data for the sizing of the storm drain collection system shall include the following:
- a. Subcatchment area plan at a clear legible scale showing the following information:
  - b. Existing and proposed contour grading at the predicted full build out of the subdivision.
  - c. Existing and proposed ground cover conditions.
  - d. Predicted flow paths and delineation of subcatchment areas to each inlet.
  - e. Rational Method calculations based on the 25-year storm event and the 100-year storm event where the collection system is expected to convey the 100-year storm flows to the receiving stormwater management facility.
  - f. Time of concentration ( $T_c$ ) worksheets based on TR-55 methodology.
  - g. Weighted average ground cover coefficient ( $C$ ) calculations.
  - h. Inlet grate capacity calculations based on Hydraulic Engineering Circular #12.
- 6.1.3 The system may make use of gutters, inlets, culverts, catch basins, manholes, subsurface piping, surface channels, and open detention basins. Leaching catch basins will not be permitted. The Board will not approve any design or component, which in its opinion, does not meet the standards of good engineering practice, will not function without frequent maintenance, or is unsuited to the character of the subdivision.
- 6.1.4. Where feasible, storm-water should be directed to enter the nearest open stream channel. At all outfalls of drainage systems, a reinforced concrete headwall or reinforced concrete flared end shall be provided. Storm-water shall not be permitted to cross any roadway upon the surface but must be piped underground.
- 6.1.5. In general, the design of pipes shall be such as to provide for a flow of water at speeds between two (2) and ten (10) feet per second under full flow conditions. The minimum grade shall be not less than 0.5 percent and the minimum pipe diameter shall be twelve inches (12"), designed to flow full with the hydraulic gradient at the crown.
- 6.1.6. Storm drains with Class III RCP pipe shall have a minimum of 3 feet of cover. Drains with less than 3 feet of cover shall use Class V RCP pipe. In no event shall drains have less than 2.0 feet of cover. All changes in pipe class shall be noted on the plan. In determining the capacity of the pipe drains, the Manning formula shall be used with coefficient of friction "n" equal to 0.013 for RCP.
- 6.1.7. Catch basins shall have a minimum four foot (4') sump below the invert and coated with bituminous waterproofing. Catch basins or inlets shall be spaced along both sides of a street at no greater than three hundred foot (300') intervals, and located at all low points and corner rounding at street junctions. Drain manholes shall be located at every change of direction and/or grade but in no cases greater than three hundred feet (300') apart. Catch basins shall not serve as manholes. All pipes from catch basins must flow to manholes.
- 6.1.8. Roof drains, cellar drains or any other "private" non-pre-existing drainage systems will not be allowed to connect to the drainage system, unless specifically waived by the Board.
- 6.1.9. Cross culverts and drainage control facilities shall be based on all storms up to a one-hundred (100) year frequency storm. At cross culverts, drainage easements shall be established up gradient of the culvert and delineated on the Definitive Plan based on the

projected one hundred (100) year headwater elevation. The determination of the headwater elevation shall be based on TR-20 model calculations and the Federal Highway Administration Hydraulic Engineering Circular No. 5 (HEC 5).

- 6.1.10. In some cases earth and stone-paved open channels should be used. The typical section of the earth channel should have a flat bottom and side slopes of one (1) vertical on three (3) horizontal with the top of the slope at least one foot (1') higher than the design water surface. The maximum velocity allowed in an open earth channel at design flow should be six (6) fps. A coefficient of friction "n" equals to 0.025 maximum should be used for both the earth and stone-paved channels. Detailed calculations, plans and profiles showing proposed channels and treatment of channel base and side slopes shall be submitted for Planning Board approval.
- 6.1.11. Wherever drainage systems within the subdivision are located in or terminate in lands owned by others, proper easements in a form and content acceptable to Town Counsel shall be taken for their access and maintenance by Town Personnel.
- 6.1.12. Granite curb inlets per Section M9.04 shall be installed adjacent to all catch-basins at low points and any other location granite curbing is required. If located within an area of Cape Cod berms, a minimum six feet (6') transition curbing (granite, Type VA4) shall be installed along the curb line on both sides of the curb inlet. The Cape Cod berms shall be constructed to blend with the transition curb.
- 6.1.13. Components of the collection system such as drainage piping, ditches, swales, etc. may be located within Access / Utility Easements. Provisions for vehicular access shall be provided along the entire length of storm drain lines and swales within all designated Utility Easements.
- 6.1.14. Rip-rap spillways shall be provided at all pipe outfalls and critical areas within drainage swales or ditches subject to erosive conditions.
- 6.1.15. The drainage design in its entirety shall minimize long term safety issues, maintenance, and/or reconstruction requirements to the satisfaction of the Planning Board.
- 6.1.16. All pipe crowns in manholes must match or the crown of the inlet pipe must be higher than the crown of the outlet pipe.
- 6.1.17. No catch basins shall be installed in front of driveway or handicap ramp openings.
- 6.1.18. All runoff from storms up to the one hundred (100) year storm must flow through the drainage control facilities (detention ponds, etc.) and be mitigated prior to flowing beyond the site. Although the pipes are designed for the twenty-five (25) year storm, the runoff for storms up to the one hundred (100) year storm must reach the drainage control facility either through the pipe systems, swales or overland with easements.
- 6.1.19. Stormwater drainage pumping stations are not allowed.
- 6.1.20. When in the opinion of the Planning Board and confirmed by the reviewing independent Registered Professional Engineer that the existing street drainage and/or downstream drainage systems are inadequate, the stormwater management system design shall maintain both rate and volume controls at pre-development levels.

## **6.2. Storm Drainage Construction Requirements**

- 6.2.1. Drainage facilities shall be provided as indicated on the plan and in conformity with these regulations and the requirements of Sections 200, 220, 230 and 258 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges 1995, herein referred to as the Standard Specifications.
- 6.2.2. The drainage system shall be in place and functional and approved by the Highway Surveyor and the Planning Board at the time of the installation of the binder course

pavement. Utility As-Built Plans of the installed drainage system must be submitted and approved by the Planning Board and the Department of Public Works prior to the installation of the binder course pavement.

- 6.2.3. Unsuitable material below normal pipe invert shall be removed and replaced with suitable material. Unsuitable material shall not be used for trench backfill. Pipe and conduits shall be surrounded by 6 inches of compacted screened gravel if set in earth, and 12 inches if set in rock.
- 6.2.4. The standard depth of catch-basins shall be four feet (4') below the invert of the outlet. Manholes shall be constructed to the required depth at each junction point and as shown on the plan. Pipe culvert and pipe drains shall be in conformity with the requirements of Section 230 for installation of pipes.
- 6.2.5. All drain pipes except sub-drains shall be reinforced concrete pipe (RCP) with bell and spigot gasketed joints and shall be installed according to the size as shown on the plans. No backfilling of pipes shall be done until approval of the Department of Public Works. All drainage trenches shall be backfilled per Section 201.
- 6.2.6. Where sub-drains are required they shall be constructed in conformance with Section 260 of the Standard Specifications. Such sub-drains may be required by the Board following clearing and grubbing operations. No drainage pipes from roof drains, driveway drains, or other on-lot sources shall be connected to the street drainage system. Cast iron manhole covers and catch-basin grates shall be as manufactured by or equivalent to E.L. LeBaron Foundry Model No.'s LB 268-3 for manholes, L.F. 248-2 or LK-120A (Cascade Grate) for catch-basins. The word "DRAIN" shall be cast into the drain manhole covers.
- 6.2.7. No more than four (4) pipe openings shall be allowed in any one manhole. Four (4) foot diameter manholes will be used for drains up to thirty (30) inches in diameter. Five (5) foot diameter manholes shall be used for pipe diameters between thirty-six (36) and forty eight (48) inches. Pipes shall not enter a manhole less than 90 degrees of the direction of flow. All connecting lines shall have bricked inverts rounded into the direction of flow.

#### 4700. UTILITIES.

1. Gas, cable, TV, and electric lines shall be installed to meet the standards of the respective utility companies.
2. All utilities shall be underground. Other portions of the utility systems that are constructed above ground shall be screened by evergreen shrubs.
3. The utility strip shall be located on the opposite side of the street from the sidewalk.
4. All utilities installed shall have a capacity judged by the Planning Board to meet future requirements.
5. Utilities shall be inspected upon installation, in accordance with Section 6100, and approved before continuing the project.
6. Where public sewers are required, the following design standards shall apply:
  - a. Public sewers shall be designed according to professional engineering practices and in accordance with the requirements of the standards of the Water Department.
  - b. Public sewers shall be not less than eight (8) inches in diameter; house services not less than six (6) inches.

- c. Manholes shall be located at every change in grade or horizontal alignment but not more than three hundred (300) feet apart.
7. Where public water service is required, the following design standards shall apply:
  - a. Public water mains shall be not less than eight (8) inch diameter Class 52 cement lined ductile iron pipe with push-on gasket joints.
  - b. Connection to town water mains shall be the subdivider's responsibility but shall be made only under the direction of the Department of Public Works Superintendent. A water permit must be obtained from the Department of Public Works prior to tapping any main.
  - c. Water mains shall be laid in dry trenches on a twelve (12) inch bed of sand or approved material. Construction pipe shall be manually tamped with sand the full length of the pipe up to one half (1/2) the diameter of the pipe so as to eliminate any voids under the pipe.
  - d. Water mains shall be laid to provide a minimum cover of five (5) feet below the finished grade and a maximum of seven (7) feet.

#### 4800. STREET TREES.

1. Suitable mature trees along the road should be kept where possible. Once the road has been completed, shade trees of at least two (2) inch caliper at Diameter Breast High (DBH) should be planted on average every forty (40) feet along each side of the road. Trees shall be located four (4) feet beyond the edge of the curbing and shall not interfere with existing or proposed sewer or utility connections. Shade trees meeting the approval of the Planning Board shall be planted.
2. In order to protect against the potential for all of the street trees in any subdivision to be lost to disease or insects, no more than one third (1/3) of the trees planted shall be of the same species.
3. Trees planted shall have temporary labels so that inspectors can determine that the species shown on the plan have actually been planted. The applicant is responsible for assuring that all planted trees are alive at the time of final performance guarantee release. All trees should be alive one (1) year after planting.

#### 4900. FUTURE DEVELOPMENT.

In determining the design standards to apply to any particular subdivision plan, the Board shall consider the potential for future development along or off the proposed ways. The extent of the potential for future development shall be based upon the existence of developable land contiguous with the subdivision property, and of dividable lots in the subdivision property, whether or not such development of division might constitute a subdivision; and shall also be based upon the topography of such land or lots, and the zoning provisions and other laws applicable to such land or lots which may affect its use. The Board shall apply to the particular subdivision plan those design standards that would be applied if the adjoining land or dividable lots were developed so as to maximize

the burden imposed upon the ways, utilities, and services of the proposed subdivision. The Board may waive the requirements of this section only upon the undertaking of the applicant, by covenant or otherwise, to the satisfaction of the Board, which will prevent the imposition of an increased burden upon the subdivision by future development, and also upon a finding by the Board that such waiver is in the interest of the public health, safety and welfare.

## **SECTION 5000. CONSTRUCTION REQUIREMENTS**

### **5100. SEQUENCE OF WORK.**

Prior to starting any construction activities, a registered land surveyor shall set off grade stakes along the roadway right-of-way, centerline, sidelines, and sidewalks at one hundred (100) foot intervals. All trees to be preserved shall be flagged. The site shall be walked with a designated representative of the Department of Public Works. All construction and work sequencing shall be conducted in accordance with the following sections.

#### **5110. Clearing.**

1. The entire area to be paved of each street, way, sidewalk, and/or bike path, if required, shall be cleared of all stumps, brush, roots, boulders and like material, and all trees not intended for preservation.
2. Beneath all areas proposed to be paved, all loam or soft, spongy or otherwise undesirable material such as peat, roots, mulch or quicksand shall be removed to whatever depth it occurs.
3. This work shall be inspected and approved as hereinafter described before continuance of the project.

#### **5120. Rough Grading.**

1. The entire length and width of the vehicular way shall be brought to a firm subgrade at least nine (9) inches below the finished grade shown on the profile.
2. The entire length and width of the sidewalk, if required, shall be brought to a firm subgrade at least nine (9) inches below the finished grade desired.
3. All fill or ordinary borrow for the subgrade shall consist of any firm bearing material, except loam or organic matter, meeting the approval of the DPW Superintendent and of the consulting engineer, if any.
4. This work shall be inspected and approved as hereinafter described before continuance of the project.

#### **5130. Finish Grading and Paving.**

1. If required, permanent stone or concrete curbing matching that of existing adjacent streets, shall be installed at a nominal height of six (6) inches above gutter with bottom at least twelve (12) inches below the surface of the pavement.
2. All subgrades of vehicular ways shall be covered with at least twelve (12) inches of well-compacted gravel to a point three (3) inches below the finish grade shown on the profile, with a traverse pitch from centerline to pavement edge of one quarter (1/4) inch per foot. All vehicular ways shall then be finished with bituminous concrete meeting Massachusetts DPW current standards. Concrete to be applied in a two (2) inch binder core and subsequent one (1) inch top coat, both well rolled and compacted to maintain the pitch above noted.
3. If required, all subgrades of sidewalks shall be covered with at least six (6) inches of well compacted gravel to the desired finish grade and pitched one

quarter (1/4) inch per foot toward the vehicular way. The surface shall then be treated as required for vehicular ways. Where driveways cross such paved areas of sidewalks, the elevation of such driveway shall conform to the elevation of the paved sidewalk area.

4. The subgrade under the roadway gravel base shall be a free-draining material for a minimum depth of two (2) feet and shall conform to the requirements of Section M1.020.0 or M1.03.0 of the Standard Specification. Existing soils that do conform to these requirements shall be removed.

5. The gravel base of the roadway and sidewalks shall consist of unfrozen, hard, durable stone and coarse sand, free from loam and clay, uniformly graded, containing no stone having a diameter of more than three (3) inches and conforming to the requirements of Section M.1.03.1 of Standard Specifications.

6. Gradation tests (sieve analysis) and Proctor tests (optimum density) shall be performed by an approved independent testing laboratory on the material to be utilized as gravel base and shall be submitted to the Department of Public Works for review. This analysis shall be done at the expense of the subdivider in advance of applying or grading the material. The Board may, at any time during the roadway construction, require additional testing.

7. Before the gravel is spread, the roadbed shall be sloped to a true surface, conforming to the proposed cross section of the road, and no gravel is to be spread until this subgrade is approved by the Board.

8. Gravel for base shall be spread in two (2) layers of equal thickness, each thoroughly rolled true to lines and grades so as to yield a total depth of twelve (12) inches after thorough compaction. Any depression or soft spots that appear during or after rolling shall be filled with crushed bank gravel and be re-rolled until the surface is true and even. Gradation and compaction tests shall be performed and submitted to the Board for review. Testing results shall be satisfactory to the Board prior to placement of base course of pavement.

9. All sidewalk areas shall be provided with a gravel base foundation consistent with that required for roadways. Gradation and compaction tests shall be performed and submitted to the Board for review.

10. All frames, grates, manhole covers and water gates shall be adjusted to the proper finished grade by setting the same in a two thousand five hundred pound per square inch (2500 lb./sq.in) concrete bed. Any depressions or irregularities in the binder pavement are to be repaired and shall be inspected by the Board's representative at least one (1) week before final paving.

11. The binder course pavement must be swept clean of all loose material. A tack coat of emulsified asphalt shall be applied with a pressure distributor at a rate of ten hundredths (0.10) gallons per square yard, immediately preceding the top course paving. An environmentally safe synthetic mat specifically designed for the purpose may be substituted for the tack coat of emulsified asphalt.

12. All roadways shall be prepared in such a manner that all manholes, catch basins, valve gates or other structures in a roadway are installed with bituminous paving around the perimeter of each such structure such that a smooth transition is maintained between the top of each structure and the road surface.

13. If requested by the Board, compaction and plane of finished surface tests shall be performed on the top course paving once in place. All requested testing shall be performed by an independent testing laboratory at the expense of the subdivider. The Board may request remedial repairs or replacement of any portion of the pavement system if it fails to meet these and/or the Standard Specifications.

14. The developer shall make and maintain all subdivision roadways so that any and all occupied dwelling units within the subdivision are easily accessible to all municipal and emergency services. In addition to the above requirement, the developer must comply with the following conditions to the satisfaction of the Board prior to the first day of December (the beginning of the wintering over period).

15. All grass strips and other areas within the street right of way shall be covered with at least six (6) inches of loam (depth after compaction) and planted with high quality grass seed. Seeding of lawn grass shall be done after building construction has been completed on the adjacent lots.

16. This work shall be inspected and approved as hereinafter described before continuance of the project.

#### 5131. Curbing.

Standard Type VA-4 granite curbing with six (6) inch reveal, sloped granite face curbing, or bituminous concrete curbing if determined by the Planning Board, shall be installed along both gutter lines of all ways for their entire lengths except that granite curbing shall be installed along said gutter lines under the following conditions:

1. All finished street grades over five percent (5%).
2. All headers for catch basins (to be set back four (4) inches from the edge of pavement).
3. All street intersections on the curve and extending six (6) feet tangential to the point of curvature and point of tangency along the sideline line of roadway at the intersection; and
4. Other specific locations as determined by the Board.
5. Granite curbing shall be set in concrete and on at least six (6) inches of compacted bank gravel in accordance with the cross section. Straight ended granite curb inlet stones shall be used in all instances.

#### 5140. Construction.

Drainage facilities shall be provided as indicated on the Definitive Plan and in conformity with the requirements of Sections 200, 220, and 230 of the MDPW Standard Specifications.

1. Pipe culvert and pipe drains shall be in conformity with the requirements of Section 230 of the MDPW Standard Specifications for installation of pipes.
2. No backfilling of pipes shall be done unless and until the installation has been inspected by the Town Engineer. All drainage trenches shall be filled with clean gravel borrow in accordance with Section 150 of the MDPW Standard Specifications.

3. Where sub-drains are required they shall be constructed in conformance with Section 260 of the MDPW Standard Specifications. Such sub-drains may be required by the Board following clearing and grubbing operations.
4. No drainage pipes from roof drains, driveway drains or other on-lot sources shall be connected to the street drainage system without the express written approval of the Planning Board.
5. Catch basins shall be constructed with cast iron frames and grates. Frames must be set in a full bed of cement mortar. Bricks shall be used between the frame and top course for grade adjustments. They shall be laid in a radial fashion with full bearing on the ring row. A maximum of two (2) brick courses will be allowed. Frames shall be at least two hundred sixty five (265) pounds and shall be of North American manufacture. Grates shall be twenty four (24) inches square with square openings. Grates shall be no less than two hundred ten (210) pounds, in accordance with Standard Specifications and shall be of North American manufacture.
6. Granite curb inlets shall be provided at all catch basins.
7. Manholes shall be constructed with cast iron frames and covers. Frames must be set in a full bed of cement mortar. Bricks shall be used between the frame and top course for grade adjustments. They shall be laid in a radial fashion with full bearing on the ring row. A maximum of two (2) brick courses will be allowed. Frames shall be at least two hundred sixty five (265) pounds and shall be of North American manufacture. Covers shall be no less than two hundred ten (210) pounds, in accordance with the Standard Specifications and shall be of North American manufacture. Drain manhole covers shall be twenty four (24) inches in diameter and shall have the word "DRAIN" cast into them in letters at least three (3) inches in height. Sewer manhole covers shall be thirty (30) inches in diameter and shall have the word "SEWER" cast into them in letters at least three (3) inches in height.
8. Manholes shall have rung steps fifteen (15) inches on center built into the vertical side.
9. After the completion of roadway work, the manhole casting shall be set flush with the designed finish grade of pavement. Catch basin grates shall be set one (1) inch below the finished gutter. Manhole castings and catch basin grates shall not be raised until thirty (30) days prior to final paving. If paving does not occur within said thirty (30) days, they shall be lowered immediately. Ramping is prohibited.

#### 5150. Monuments.

Monuments shall conform to the standard specifications acceptable to the Massachusetts Land Court and shall be set according to such specifications. No permanent monuments shall be installed until all construction which would destroy the monuments is completed.

Monuments shall be installed at all street intersections, at all points of change in direction or curvature of streets and at other points where, in the opinion of the Planning Board, permanent monuments are necessary.

Permanent boundary markers shall be placed on lot boundaries. The minimal number is four (4): either at the four (4) corners or two (2) at the roadway and two (2) at a setback distance acceptable to the Board.

5160. Street Signs.

The applicant shall install standard street signs displaying the name of each street in the subdivision to be located so that the public can identify each street. Signs shall be equivalent in size, design and quality to those used by the town for its streets and may be purchased for the Town DPW.

5170. Inspection and Approval Procedures.

The applicant shall proceed with this work as previously specified and when completed he shall request inspection and final written approval of the street or way or portion that is under construction.

The Planning Board shall control the construction of the streets or ways of the subdivision by inspection and approval of the work through the services of the Superintendent of the DPW, or his agent, and by the consulting engineer, if any. The necessary approvals for each step of the construction must be obtained by the applicant in the aforementioned sequence of work.

The Planning Board may, in cases of minor construction or undue hardship upon applicant, waive any inspection except that which is required for final approval by issuing provisional approval pending full approval after the next inspection.

It shall be the applicant's responsibility to notify the Board when a portion of the work is ready for inspection and the Board shall cause said inspection to be made within seven (7) days of receipt of such notice, Saturdays, Sundays and holidays excluded.

Approval of the work inspected shall be given to the applicant by the superintendent of the DPW before the next portion of work is commenced in the street or way, and such approval shall be forwarded to the Planning Board by the Superintendent of the DPW.

If corrections are required in the work they shall be made before approval is given for a portion and before subsequent work is stated, unless written authority by the Planning Board is given to proceed into the next portion of work while making the required corrections.

Failure to carry out the provisions of this paragraph shall be cause for the Planning Board to order such work done as may be necessary to make adequate inspection and correction of the work under construction, at the expense of the applicant.

## **SECTION 6000. ADMINISTRATION.**

### **6100. INSPECTION.**

6110. General. For the protection of the Town and future residents of the subdivision, a series of inspections during the course of construction are required to ensure compliance with the approved Definitive Plan and the Board's Rules and Regulations.

6120. Inspection Requests. Inspections shall be requested by the subdivider at least four (4) full working days in advance by written notice to the Board and its duly authorized representative.

6130. Inspections Required. The subdivider shall contact the Planning Board and its duly authorized representative for inspections regarding the following aspects of the subdivision, at the specified times:

6131. Erosion control: following installation of erosion control measures.

6132. Clearing and Grubbing: following completion of roadway and drainage clearing work.

Roadbeds: following excavation of the roadbed, but prior to any backfilling.

6133. Drainage system: following installation of drainpipe, culverts, catch basins, and all related construction, but prior to any backfilling.

6134. Underground utilities: following laying of electric, telephone, and fire alarm cable in roadway and to individual dwellings, but prior to any backfilling.

6135. Finished subgrade: following installation of backfill and compaction of subgrade.

6136. Finished gravel foundation: following application, grading, and compaction of gravel foundation.

6137. Pavement: notice shall be given so that inspection may be conducted during and upon completion of paving.

6138. Final inspection: following completion of roadways, permanent benchmarks, curbing, berming, walkways, grading, seeding and cleanup.

6139. Backfilling. No water main, storm drain, catch basin, utility installation, road subgrade or foundation, or any other item of work designated for inspection, shall be backfilled or paved over until inspected and approved by the Board or its duly authorized representative.

### **6200. REFERENCE.**

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

6300. AMENDMENTS.

These Rules and Regulations or any portion thereof may be amended, supplemented, or repealed from time to time by the Board, after a public hearing, on its own motion or by petition.

6400. SEVERABILITY.

If any section, paragraph, sentence, clause, or provision of these Rules and Regulations shall be adjudged invalid, the adjudication shall apply only to the material so adjudged, and the remainder of these Rules and Regulations shall be deemed to remain valid and effective.

6500. AS BUILT PLANS.

Prior to final release of security, the applicant shall provide the Town with as-built plans of all roads, drainage systems, etc., on durable material from which contact print copies can be made. These plans shall show the precise locations, size, type, etc., of all required construction, as built, and shall include but not be limited to, the components of water, sewer and drainage system, other public utilities, elevations, slopes, street layout monuments, etc., as necessary to show that design requirements have been met and changes documented. These plans shall be certified by the designing engineer that the information shown correctly represents the construction as built. In addition to the Mylar and copies of the "as built" plan, the applicant shall produce a copy of the "as built" plan on an AutoCAD system compatible with MAGIS. Prior to endorsement by the Planning Board, the applicant shall submit the approved version of the plan and three and one half (3 ½) inch diskettes, in AutoCAD Release 14 (or any subsequent release which the Town adopts or requires) to the Planning Board for review and approval. The computer version of the Definitive plan shall be identical, full size, and shall contain all information included on the plan.

**APPENDIX A: APPLICATION FEES**

1000. PROCEDURE.

The Planning Board shall not accept an application nor schedule a public hearing unless all applicable fees accompany the plan. All application fees are non-refundable. Unless otherwise set by the Planning Board, the following fees shall apply to all plans submitted to it:

2000. APPLICATION FEE SCHEDULE.

Approval Not Required	\$50 per lot
Preliminary Plan	\$100 PLUS \$500 for one (1) to five (5) lots, or \$100 per lot for six (6) or more lots
Definitive Plan	\$200 if no Preliminary Plan/Form 2B is filed \$100 if a Preliminary Plan/Form 2B is filed PLUS \$500 for one (1) to five (5) lots or \$100 per lot for six (6) or more lots NOTE: These lot fees are waived if paid at the Preliminary Plan stage PLUS \$1 per linear foot of roadway
Residential Compound	\$1000 per application
Re-Submissions	\$100 per change or re-signing of plans
Modification of Preliminary Plan	\$75 PLUS \$50 each lot affected PLUS \$50 each new building lot PLUS \$50 for modification of drainage
Modification of Definitive Plan	\$75 PLUS \$100 each lot affected PLUS \$100 each new building lot PLUS \$50 for modification of a road PLUS \$50 for modification of a drainage structure
Special Permit	\$175 application fee PLUS \$75 for modification or extension
Site Plan Review	\$75 for sites with 10 or fewer parking spaces \$125 for sites with more than 10 parking spaces PLUS all Planning Board expenses including outside expenses for consultants
Repetitive Petition	\$75 rehearing from ZBA
Revised application	If there is an increase in lots, the difference between the original number of the lot fee and the total fee including all new lots must be paid.

3000. ENGINEERING REVIEW AND CONSULTING FEE SCHEDULE.

a. Preliminary Plan, Modification of Preliminary Plan, Modification of Definitive Plan, Modification to Special Permit:

<b>SIZE</b>	<b>FEE</b>
2-15 lots or units	\$2000
16-20 lots or units	\$3000
21-25 lots or units	\$4000
Over 25 lots or units	\$5000

b. Initial Definitive Plan or Special Permit

<b>SIZE</b>	<b>FEE</b>
2-15 lots or units	\$4000
16-20 lots or units	\$6000
21-25 lots or units	\$10,000
Over 25 lots or units	\$20,000

The Planning Board shall not accept an application nor schedule a public hearing without receipt of a \$2000 deposit to be used only for payment of engineering and consulting services related to the proposed project. A minimum balance of \$2000 must be maintained in the project's account. Any money not used for review services will be returned to the applicant at the time of final covenant release.

**APPENDIX B: REQUIREMENTS FOR STORMWATER MANAGEMENT PLAN  
(SWMP)**

*This information is contained in Section 4600. STORMWATER MANAGEMENT.*

## **APPENDIX C: REQUIRED FORMS**

*Note: Forms currently on file in the Planning Board office, 2 Spring Street, Marion, MA 02738.*

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