

Town of Carver, Massachusetts

RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND

Carver Planning Board Effective: February 19, 2008

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SECTION 1.0 PURPOSE AND AUTHORITY

1.1 PURPOSE

These Rules and Regulations have been enacted for the purpose of protecting the safety, convenience and welfare of the inhabitants of the Town of Carver by regulating the layout 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 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.
- Lessening congestion in such ways and in the adjacent public ways.
- Reducing danger to life and limb in the operation of motor vehicles.
- Securing safety in the case of fire, flood, panic and other emergencies.
- Ensuring compliance with the applicable Zoning By-Laws of the Town of Carver.
- Securing adequate provision for water, sewage, drainage, underground utility services, fire, police and other municipal equipment, street lighting and other requirements where necessary in a subdivision.
- Coordinating the ways in a subdivision with each other, with the public ways in the Town of Carver, and the ways in neighboring subdivisions.
- Ensuring conformance to the recommendations of the Board of Health.

The Planning may regulate for all of the purposes set forth in the Subdivision Control Law, particularly G.L. c. 41, ss. 81M and 81Q, without limitation, and the following additional purposes:

- To implement the Planning Board's development objectives, policy decisions, and design standards.
- To provide the Planning Board with information reasonably necessary to perform its duties pursuant to statute.
- To regulate the submittal, review, and certification of plans believed not to require subdivision approval.

1.2 AUTHORITY

These Rules and Regulations governing the subdivision of land have been adopted by the Planning Board of the Town of Carver, pursuant to authority vested in said Board by G.L. c. 41, s. 81Q.

1.3 AMENDMENT

These Rules and Regulations or any portion thereof may be amended, supplemented, or repealed from time to time by the Board, after a public hearing, on its own motion or by petition, all pursuant to G.L. c. 41, s. 81Q.

1.4 SEVERABILITY

The invalidity of any section, subsection or provision of these Rules and Regulations shall not invalidate any other section, subsection or provision thereof. If any provision of these Regulations is held by any court of competent jurisdiction to be invalidly applied to any particular case, all other applications of such provisions to other cases shall not be affected thereby.

SECTION 2.0 DEFINITIONS

For the purposes of these Rules and Regulations the following words and terms used herein are hereby defined or the meaning thereof explained, extended, or limited as stated in G.L. c. 41, as amended. Where a term is defined in the Subdivision Control Law or the Carver Zoning By-Laws and not herein, such definition shall be incorporated into these regulations by reference. Other terms or words or phrases 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. All references to departments, boards and commissions shall be taken to mean the department, board or commission of the Town of Carver.

Applicant: All owners of the land referred to in an application filed with the Planning Board, or the owner's duly authorized representative. Such representatives shall submit a letter of authorization from the record owner(s) of the land.

Board: The Planning Board of the Town of Carver.

Dead-End Street: A street, or a combination of streets, which has only one means of ingress from or egress to a major, secondary, or minor street.

Department of Public Works: The Department of Public Works of the Town of Carver.

Director of Public Works: The Director of the Department of Public Works of the Town of Carver, or his or her designee.

Easement: A right acquired by a public authority or other person for use or control of property for utilities, travel, or other designated public or private purpose.

General Laws or G.L.: The General Laws of the Commonwealth of Massachusetts, as amended.

Lot: An area of land in one ownership, with definite boundaries, used, or available for use, as the site of one or more buildings complying with the area, frontage and other requirements of the Zoning By-Laws of the Town of Carver.

Lot Frontage: That portion of a lot fronting upon and having rights of access to a way providing legally sufficient frontage for a division of land under the requirements of MGL Ch. 41, Sec. 81L, to be measured continuously along a single street line, through which access is attainable to the lot.

MassHighway Standards: The latest revisions of the Standard Specifications For Highways and Bridges and Construction Standards of the Massachusetts Highway Department.

Owner: The owner of record as shown by the records in the Plymouth County Registry of Deeds or Land Court Registry. Parcel: An area of land in one ownership, with definite boundaries, not available for use as the site of one or more buildings.

Person: An individual, two or more individuals, a partnership, association or corporation having a common interest in a tract of land.

Plan, Definitive: A plan of a proposed subdivision or resubdivision submitted in accordance with these Rules and Regulations and with G.L. c. 41, s. 81T.

Plan, Preliminary: A plan of a proposed subdivision or resubdivision submitted in accordance with these Rules and Regulations and with G.L. c. 41, s. 81S.

Profile: A vertical section generally taken along the centerlines of streets, including storm drainage, water and sanitary sewage facilities.

Registered Mail: Registered or certified mail.

Registry of Deeds: The Registry of Deeds in Plymouth County, including when appropriate, the recorder of the Land Court.

Roadway: That portion of a street intended for vehicular use.

Rules and Regulations: The Rules and Regulations Governing the Subdivision of Land in Carver, Massachusetts, as most recently adopted by the Carver Planning Board pursuant to G.L. c. 41, 81O.

Scenic Road: Any road in the Town of Carver designated a Scenic Road under the provisions of G.L. c. 40, s. 15C by a vote of Town Meeting.

Street. See Carver Zoning By-Law definition.

Street, Major: A street that, in the opinion of the Board, is being or will be used as a thoroughfare between different portions of the Town of Carver, or between towns, or which will otherwise carry a heavy volume of traffic (generally, over 2,000 vehicles per day).

Street, Minor: A street that, in the opinion of the Board, is being or will be used primarily to provide access to abutting lots, and which is designed to discourage its use by through traffic.

Street, Secondary: A street intercepting one or more minor streets and which, in the opinion of the Board, is being or will be used to carry a substantial volume of traffic (generally, over 1,000 vehicles per day).

Subdivision: The division of a tract of land into two or more lots and shall include re-subdivision, and, when appropriate to the context, shall relate to the process of subdivision or the land or territory subdivided; provided, however, that a 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 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 of 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.

Subdivision Control Law: Sections 81K through 81GG, inclusive, of Chapter 41, Massachusetts General Laws, as amended.

Technical Review Committee. A committee appointed by the Planning Board for the purposes of providing reviews, comments, and recommendations to the Planning Board for Site Plan Review, Subdivision, and other applications under the Board's jurisdiction.

Town: The Town of Carver, Massachusetts.

Utilities: Sewers, water pipes, storm drains, gas pipes, electrical lines, cable or telephone lines, fire alarm systems and their respective appurtenances.

Wetlands: All land defined as wetland pursuant to G.L. c. 131, s. 40, and the Town of Carver Wetlands Protection By-law, General By-laws Section 30700, as may be amended, not including buffer zones, as defined through an Abbreviated Notice of Intent or Notice of Intent approved by the Conservation Commission.

Zoning By-Law: The Zoning By-Law of the Town of Carver.

SECTION 3.0 GENERAL REGULATIONS

The following regulations shall apply in all circumstances governed by the Subdivision Control Law.

3.1 APPLICABILITY

Any person desiring to divide or subdivide land shall, before proceeding with the improvement or sale of lots in the division or subdivision, or the construction of ways, or the installation of municipal services therein, submit to the Board a plan of such division or subdivision pursuant to the Subdivision Control Law and secure approval by the Board as hereinafter provided.

3.2 APPLICATIONS AND OTHER REQUIRED SUBMITTALS

All applications for approval or endorsement, required plans, required submittals, and required fees shall comply in all respects with the provisions of these Rules and Regulations. No application or plan shall be acted upon by the Board until said plan, together with all required accompanying applications, forms, fees, lists and other items have been delivered by the applicant, and are properly executed and fully completed in accordance with these Rules and Regulations. Where the applicant fails to comply with these Rules and Regulations, the Planning Board may reject the application and such application shall be deemed not submitted.

3.3 COMPLIANCE WITH THE BOARD'S RULES AND REGULATIONS

A proposed division and/or subdivision of land shall comply in all respects with these Rules and Regulations, unless the Board authorizes a waiver in specified and authorized instances.

3.4 WAIVERS

Strict compliance with these Rules and Regulations governing the subdivision of land 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.

3.5 ISSUANCE OF BUILDING PERMITS

The Building Inspector shall not issue any permit for erection of a building until the following conditions have been satisfied:

1. The lot on which the building is to be erected is not within a subdivision, or, 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.

2. All other applicable requirements have been met.

3.6 PROFESSIONAL AND TECHNICAL ASSISTANCE

The Board may request technical assistance from town officials, and may hire professional assistance to review plans and inspect improvements at the cost of the applicant.

3.7 FEES

The fees indicated in Appendix A, Application and Review Fees 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.

3.8 MODIFICATION, AMENDMENT, OR RESCISSION OF SUBDIVISIONS

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 G.L. c. 41, s. 81W, as amended.

3.9 DWELLING LIMITATION

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.

3.10 ACCESS ADEQUACY REGULATIONS

3.10.1. 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, G.L. c. 41, ss. 81K - 81GG.

3.10.2. Standards of Adequacy

- 1. Approval Not Required Lot. Ways providing access to lots developed pursuant to G.L. c. 41, s. 81P shall normally be considered adequate for access if said way has, in the opinion of the 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, including adequate access for fire, police and emergency vehicles at all times, and if the layout and construction will permit the proper installation of municipal services to serve the land to be divided.
- 2. Within a Subdivision. Streets within a subdivision shall be considered to provide adequate access if complying with the standards established in these Rules and Regulations.
- 3. To a Subdivision. Existing ways providing access to streets within a subdivision shall be considered to provide adequate access if such existing way meets the standards set forth herein for width of right of way, pavement width, sight distance, and maximum grade.

3.10.3. Obligations

If the Planning Board determines that the physical condition, design or other features, including the width, of a public way from which a subdivision has access are considered unsafe or inadequate, the Board may require specific improvements to the public way(s) to address these conditions, as conditions of its approval of a Definitive Plan. All improvements to public ways required by the Planning Board shall also be subject to the approval of the Board of Selectmen.

The Board may require improvements to an existing public to meet the applicable standards of the Subdivision Rules and Regulations for a minor, secondary or major street when access from the existing street to the subdivision is proposed. The Board may make these improvements a condition of its approval of a subdivision. The Board may consult with the Department of Public Works and outside consultants to determine the need for such improvements. Any mitigation requirements within the public way, including dedication of land for the purpose of widening, shall be made only with the permission of property owners and the Board of Selectmen or other governmental agency having jurisdiction over such way. All costs of such efforts shall be borne by the applicant.

In the event physical improvements are impracticable, the Board may require a pro-rata monetary contribution to a capital project undertaken by the Town for access improvements that would benefit the proposed subdivision.

3.10.4. Waiver of Access Rules

The Board may waive strict compliance with these access regulations only upon its determination, following consultation with the Department of Public Works, Police Chief, Fire Chief, and the Board's 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.

3.11 AUTHORIZATION TO SUBMIT A PLAN

Where any plan is submitted by an individual or agency other than the owner of the affected land, the applicant must provide a letter from the owner authorizing the applicant to submit the plan with an original signature. Evidence of the owner's rightful ownership of the land, such as a deed, must also be submitted with all applications. All applications shall include a Municipal Lien Certificate, indicating no outstanding taxes or assessments are due on the property.

SECTION 4.0 PLAN BELIEVED NOT TO REQUIRE APPROVAL

4.1 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 may submit such plan to the Planning Board seeking an endorsement to the effect that such approval is not required.

4.1.1. Application

Said person shall file with the Planning Board an approved application form, with an original and (5) prints of the plan, together with a fee, in accordance with the most recent schedule of fees adopted by the Planning Board. Such application shall be accompanied by evidence intended to show that said plan does not require approval under the Subdivision Control Law pursuant to G.L. c. 41, s. 81P.

4.1.2. Notice

Said person, in accordance with General Laws, Chapter 41, Section 81T, shall give written notice, by delivery or registered mail, to the Town Clerk stating the date of the submission of the plan to the Planning Board. If such notice is given by delivery, the Town Clerk shall, if required, give written receipt thereof to the person who delivered such notice.

4.1.3. Referral

The Planning Board will refer any plans so submitted to the Police Department, Fire Department, Department of Public Works, and Conservation Commission for review.

4.1.4. Electronic File

The applicant shall submit a CD or diskette containing the Form A plan, produced by an AutoCAD or similar computerized drafting system, in either AutoCAD Drawing Format (.dwg), Data Exchange Format (.dxf) or ESRI Interchange Format (.e00), registered to Massachusetts State Plane (Mainland) Coordinates, North American Datum of 1927 or 1983, as part of the application for endorsement of the plan. Orthophotos available from MassGIS may be used in registering data. A copy of the plan shall also be provided in Adobe Portable Document Format (.pdf). If the applicant is unable to provide the above, a fee determined by the Board will be charged to cover the cost of digitizing the plan.

4.2 CONTENTS

4.2.1. Size of Plan

All plans submitted under this Section shall be of minimum dimensions of eight and one-half inches (8.5") by eleven inches (11") and of maximum dimensions of twenty-four inches (24") by thirty-six inches (36") or such other size as may be specified by Land Court.

4.2.2. Required Information

Plans shall bear the following information:

- 1. Title Block containing the following information:
 - a. Name of owner of record.
 - b. Title, date and scale of plan and a bar scale.
 - c. Name and address of Registered Land Surveyor.
 - d. The statement "Approval Not Required Under the Subdivision Control Law" and sufficient space for the date and the signatures of all members of the Board.
- 2. Date of Survey and/or source of information.
- 3. A block, 3 1/2" x 3 1/2" located adjacent to the title block, reserved for use by the Registry of Deeds.
- 4. The following statement, together with a location suitable for the preparer's signature: "This plan has been prepared in conformance with the rules and regulations of the Registers of Deeds."
- 5. North point.
- 6. Existing and proposed boundary lines, including dimensions and areas of all lots shown.
- 7. Existing and proposed streets, ways and easements. Where a new easement is proposed for a driveway or other vehicular access, the boundaries of this easement shall be flagged at each change in direction or at points sufficient to identify its location until the proposed driveway or roadway is completed and construction has been inspected by the town.
- 8. Location of all existing buildings, structures and bounds. In instances where a new lot line is being created, bounds shall be set along each new lot line at each change in direction.
- 9. Illustration, by broken line, of all setback lines established by the Zoning By-Law. In instances where a new lot line is being created, the Planning Board may require field verification of building setbacks from existing or new property lines.
- 10. Location(s) of any easements or rights of way traversing or adjacent to the locus. Where a new easement is proposed for a driveway or other means of access, the boundaries shall

be flagged at each change in direction until the proposed driveway or roadway is completed and construction has been inspected by the Town.

- 11. Boundaries, if any, of any area(s) which the Conservation
- 12. Commission has determined to be subject to G.L. c. 131, s. 40 and the Town of Carver Wetlands Protection By-law, General By-laws Section 30700. These areas shall be determined through approval of an Abbreviated Notice of Intent with the Conservation Commission. This approval shall be obtained prior to applying for endorsement of a plan as Approval Not Required.
- 13. Lot and/or house numbers.
- 14. Names of all abutters as they appear on the most recent tax list.
- 15. Zoning classification(s) and location(s) of any zoning district boundaries, including the boundaries, if any, of overlay Zoning Districts that may lie within the locus of the plan.
- 16. Calculation of the upland and wetland area for each proposed lot expressed in sq. ft.
- 17. Notice of any decisions of the Zoning Board of Appeals including but not limited to variances and exceptions regarding the land or any building thereon.
- 18. The locations of existing septic systems and, if known, proposed septic systems and their easements.
- 19. A locus map at 800 feet to the inch.
- 20. Any other information necessary for the Board's determination.

4.3 ENDORSEMENT

4.3.1. General

If the Board determines that the plan does not require approval, it shall forthwith, without a public hearing, endorse on the plan under the words "Approval Not Required Under the Subdivision Control Law"

4.3.2. Statement of Reasons

The Planning Board may add to such endorsement a statement as to the reason approval is not required or such other statement as may be deemed appropriate by the Planning Board. The Planning Board may include, at its discretion, the following statement: "Planning Board endorsement of this plan is not a determination as to conformance with zoning regulations." The Planning Board may also require the notation:

"Lot (No.) is Not a Building Lot Without Further Zoning Relief" in appropriate circumstances.

4.3.3. Effect

Such endorsement shall not be deemed to constitute any determination of compliance with the requirements of the Zoning By-Law. Following endorsement said plan shall be returned to the applicant and the Planning Board shall notify the Town Clerk in writing of its action.

4.3.4. Denial

If the Board determines that the plan does require approval under the Subdivision Control Law, it shall, within twenty-one (21) days of the submission of the plan, give written notice of its determination to the Town Clerk and the applicant, and return the plan without endorsement. The applicant may submit the plan for approval as provided by law and by these Rules and Regulations, or may appeal from the determination of the Board in the manner provided in G.L. c. 41, s. 81BB.

4.3.5. Constructive Approval

If the Planning Board fails to act upon a plan submitted under this Section or fails to notify the Town Clerk and the person submitting the plan of its action within twenty-one (21) days after its submission, it shall be deemed to have determined that approval under the Subdivision Control Law is not required, and the Board shall forthwith make such endorsement on said plan, or, on the failure of the Board to do so forthwith, the Town Clerk shall issue a certificate to the same effect.

SECTION 5.0 PRELIMINARY PLANS

5.1 PRE-APPLICATION CONFERENCE

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. 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.

5.2 SUBMISSION

5.2.1. General

An applicant may submit, for approval, a Preliminary Plan of a subdivision. An applicant for a non-residential subdivision shall submit a Preliminary Plan. The submission of such a Preliminary Plan will enable the subdivider, the Board, the Board of Health, other municipal agencies and owners of property abutting the subdivision to discuss and clarify the problems of such subdivision before a Definitive Plan is prepared. Therefore, it is strongly recommended in every instance that a Preliminary Plan be filed.

5.2.2. Application

An application for approval of said Preliminary Plan shall be filed with the Planning Board on the approved Application Form and (1) copies of the form, which shall be submitted together with an original and (5) prints of the plan and profile (copies of which will be distributed by the Planning Board to other Town boards, commissions and appropriate agencies), (1) copies of any supporting reports, narratives, or memoranda, and a fee as specified on the most recent Fee Schedule adopted by the Planning Board. The applicant shall give written notice, in accordance with G.L. c. 41, s. 81S, to the Town Clerk by delivery or by Registered or Certified Mail, stating the date of such submission to the Planning Board.

5.2.3. Electronic File

The applicant shall submit a CD or diskette containing the Preliminary Subdivision Plan, produced by an AutoCAD or similar computerized drafting system, in either AutoCAD Drawing Format (.dwg), Data Exchange Format (.dxf) or ESRI Interchange Format (.e00), registered to Massachusetts State Plane (Mainland) Coordinates, North American Datum of 1927 or 1983, as part of the application for endorsement of the plan. Orthophotos available from MassGIS may be used in registering data. A copy of the plan shall also be provided in Adobe Portable

Document Format (.pdf). If the applicant is unable to provide the above, a fee determined by the Board will be charged to cover the cost of digitizing the plan.

5.3 CONTENTS

5.3.1. Preparation

The Preliminary Plan shall be prepared at a scale of forty feet (40) to the inch, unless approval of submission at an alternate scale shall have been approved by the Planning Board.

5.3.2. Required Information

The Preliminary Plan shall show the following information. If the plan is submitted on more than one sheet, each sheet shall be of the same size, each containing the required title block indicating the sheet number of each sheet.

- 1. Title block, containing the following information:
 - a. Title (subdivision name), date of survey and scale.
 - b. Name of owner of record and of applicant if other than owners of record.
 - c. Name and address of Registered Land Surveyor or Registered Professional Engineer.
- 2. North Point.
- 3. Existing and proposed lines of streets, ways, easements, and any public or common areas within the subdivision (The proposed names of proposed streets shall be shown in pencil until they have been approved by the Board).
- 4. Where the applicant also owns or controls unsubdivided land adjacent to that shown on the Preliminary Plan, a possible or prospective street layout for such adjacent land shall be included.
- 5. Location, names, present widths and status as accepted or unaccepted, of adjacent streets or of streets approaching or within reasonable proximity of the proposed subdivision.
- 6. Names of all abutters as they appear on the most recent local tax list.
- 7. A locus plan at a scale of one inch (1") equals eight hundred feet (800 feet) showing the relationship of the subdivision to adjoining property within a radius of a quarter of a mile of the proposed subdivision. Any road designated as a Scenic Road, any land used for Conservation Land or parks, and any land occupied by municipal facilities within this radius, shall be so noted on the locus plan.
- 8. The zoning classification of the land shown on the plan and the location of any zoning district boundaries, including overlay districts, which may lie within the locus of the plan.
- 9. The location of all major features of the land such as existing walls, fences, monuments, buildings, large trees or wooded areas, large boulders, rock edges or ledge outcroppings, swamps, water bodies, and natural water courses including drainage ditches.
- 10. Notation of flood zone and base elevation data.

- 11. The location of the General Soils Classifications identified by the Natural Resource Conservation Service, United States Department of Agriculture as depicted on maps available at the Planning Board Office.
- 12. Existing (broken line) and proposed (solid line) topography of the land at two (2) foot contour intervals for slopes flatter than four horizontal to one vertical (4:1), and five (5) foot intervals for slopes equal to or steeper than 4:1. Where the slope of the land is less than one percent, spot elevations shall be shown to illustrate the topography of the land. Elevations shown shall be on 1929 NGVD base datum and so stated on the plan.
- 13. Approximate boundary lines of proposed lots, with approximate areas and dimensions.
- 14. Calculation of the approximate upland and wetland area for each proposed lot expressed in square feet.
- 15. Proposed systems of storm drainage, water, and sewage disposal in a conceptual manner including adjacent existing natural waterways intended to receive drainage. The approximate locations of existing and proposed septic systems and their easements.
- 16. Profiles of existing grades and approximate finished grades of proposed roadways, and drain and sewer systems at a scale of 1'' = 40' horizontally and 1' = 4' vertically.
- 17. Limits (perimeter) of all contiguous land under the ownership or control of the applicant.
- 18. Location(s) of any easements or rights of way traversing or adjacent to the locus.
- 19. Illustration, by broken line, of all setback lines established by the Zoning By-Law.
- 20. Boundaries, if any, of any area(s) which the Conservation Commission has determined to be subject to G.L. c. 131, s. 40 and the Town of Carver Wetlands Protection By-Law. These areas shall be determined through approval of an Abbreviated Notice of Resource Area Delineation with the Conservation Commission prior to filing the application for a Preliminary Plan.
- 21. An aerial photograph at 1:1,000 or scale showing greater detail, from 1995 or later, indicating the property to be subdivided, the proposed street layout, lot lines, and easements.

5.3.3. Required Supporting Documentation

The following supporting documentation shall be submitted with the application for a Preliminary Plan:

- 1. Copy of the appropriate quadrangle map(s) from the most recent published edition of the Massachusetts Natural Heritage Atlas, showing the location of the project site relative to Priority Habitats of Rare Species.
- 2. Copy of the appropriate quadrangle map(s) from the most recent published edition of the Massachusetts Natural Heritage Atlas, showing the location of the project site relative to Estimated Habitats of Rare Wildlife and Certified Vernal Pools.

- 3. A narrative description of all the utility services proposed for the project and whether connection to municipal systems will be required.
- 4. If the application requires waivers of the Subdivision Rules and Regulations, a statement shall be submitted including a description of the waiver, identification of the applicable Section of the Subdivision Rules and Regulations, and the reason the waiver should be considered in the public interest.

5.4 **PROCEDURES**

5.4.1. Review of Plan

The Preliminary Plan will be transmitted to the Board of Health, Building Commissioner, Director of Public Works, Fire Chief, Police Chief, Conservation Commission, and such other boards, committees or agencies as the Planning Board may deem advisable.

5.4.2. Observation Pits

During discussion of the Preliminary Plan, the location of observation pits shall be determined. The Board shall consult with the Department of Public Works in determining the best locations of these observation pits.

- 1. Observation pits shall be made in the presence of the Planning Board and/or its agent.
- 2. Prior to excavating the pits, the centerline of the roadway, perimeter of proposed stormwater storage and treatment facilities (e.g., detention, retention, or infiltration basins or structures), and locations of any other items deemed relevant by the Planning Board, shall be staked out on the subdivision site.
- 3. A detailed description of the soil profile shall be prepared for each observation pit, in accordance with the regulations concerning "deep observation holes" as provided in Title 5 of the State Environmental Code (310 CMR 15.00), prior to submission of a Definitive Plan.
- 4. The minimum depths of such pits shall be as follows:
 - a. Roadway Cut Areas: Five (5) feet below proposed grade or to bedrock whichever is less.
 - b. Roadway Fill Areas: Eight (8) feet below existing grade or to bedrock, whichever is less, except in unstable soils (i.e., peat, muck, etc.) where the minimum depth shall be five (5) feet below hard bottom.

- c. Stormwater Detention, Retention, or Infiltration Basins/Recharge Structures: Four (4) feet below the bottom of basin or structure, or to bedrock, whichever is less.
- d. Other features for which pits are warranted: Depth as approved by the Planning Board.

5.4.3. Preliminary Approval

Following review by the appropriate municipal agencies and the Public Discussion described above, the Planning Board may approve such Preliminary Plan with or without modifications. Such approval shall incorporate the recommendations of the Board of Health, if any.

5.4.4. Effect

Such approval does not constitute Final approval of a subdivision.

SECTION 6.0 DEFINITIVE PLAN

6.1 PRE-APPLICATION CONFERENCE

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. Sketches, which need not be professionally prepared, will assist in this discussion, and should show the critical features of a Preliminary Plan.

6.2 SUBMISSION

6.2.1. Application

Any person who submits a Definitive Plan of a Subdivision to the Planning Board for approval shall file with the Board a properly executed application form together with the original drawings and (5) print sets thereof, dark line on white background, of each plan and profile. The applicant shall also file (1) copies of any supporting reports, narratives, or memoranda, and (1) copies of stormwater management calculations.

6.2.2. Notice

The applicant, in accordance with G.L. c. 41, s. 81T, shall file by delivery or registered or certified mail a notice with the Town Clerk stating the date of submission for such approval and accompanied by a copy of the executed application form.

6.2.3. Fee

Every application for approval shall be accompanied by a fee, determined in accordance with the most recent Fee Schedule adopted by the Planning Board. Costs of advertising and notices shall be charged to the applicant, unless otherwise ordered by the Board.

6.2.4. Additional Costs

Should the Planning Board incur additional costs in the review of the Definitive Plan, such costs shall be borne by the applicant unless otherwise ordered by the Board.

6.2.5. Consultation with Other Boards and Agencies

Prior to submission of the Definitive Plan, the applicant is encouraged to review with the applicable Town departments, the proposed design, location and installation of water, sanitary sewage, and storm drainage systems. In order to avoid the need for Modification of the Definitive Plan, the applicant is encouraged to obtain approval from the Conservation Commission for infrastructure improvements prior to the close of the Planning Board's Public Hearing.

6.2.6. Other Permits

Approval of a Definitive Plan shall not be construed to eliminate the requirement that the applicant obtain all other permits required by law including, but not limited to, permits issued by the DPW, Conservation Commission, Board of Health, Board of Selectmen, Massachusetts Department of Environmental Protection and Executive Office of Environmental Affairs.

6.2.7. Electronic File

The applicant shall submit a CD or diskette containing the Final Subdivision Plan, produced by an AutoCAD or similar computerized drafting system, in either AutoCAD Drawing Format (.dwg), Data Exchange Format (.dxf) or ESRI Interchange Format (.e00), registered to Massachusetts State Plane (Mainland) Coordinates, North American Datum of 1927 or 1983, as part of the application for endorsement of the plan. Orthophotos available from MassGIS may be used in registering data. A copy of the plan shall also be provided in Adobe Portable Document Format (.pdf). If the applicant is unable to provide the above, a fee determined by the Board will be charged to cover the cost of digitizing the plan.

6.2.8. Incomplete Submissions

The Board reserves the right to disapprove incomplete submissions at any time if, in its opinion, review of the plan is hampered by the absence of required information. In the event that incomplete plans are submitted to the Board, after opening a public hearing, the Board may vote to disapprove the plan and return plans to the applicant as incomplete. The Board shall cite those specific regulations with which the plan is not in compliance in a letter noting the reason for the Board's action, which shall be filed with the Town Clerk. In the event of such disapproval, the Board reserves the right to retain any filing or review fees.

6.3 CONTENTS

6.3.1 Preparation

The Definitive Plan shall be prepared by a Registered Professional Engineer or a Registered Land Surveyor, except that the Landscape Plan shall be prepared by a Registered Landscape Architect. All lines and writing shall be clear and legible. The plan shall be at a scale of one inch (1") equals forty feet (40') or such other scale as the Board may accept to show details clearly and adequately. Sheet sizes shall be twenty-four inches (24") by thirty-six inches (36"). A margin of two and one-half inches (2.5") clear shall be allowed on the left hand side for binding and one inch (1") margin on the remaining three sides.

Multiple sheets shall be accompanied by an index sheet at a scale of 1"=100', showing the entire subdivision and all sheets shall be appropriately numbered and referenced thereto.

6.3.2 Required Sheets

The Definitive Plan shall consist of at least seven (7) separate sheets as follows:

- 1. A cover sheet, including an index, locus and legend
- 2. A subdivision plan
- 3. A layout plan and profile
- 4. A topographic plan
- 5. A landscape plan
- 6. An erosion and sedimentation control plan
- 7. Detail drawings on a separate sheet(s)

6.3.3 Required Information

The Definitive Plan shall contain the following information:

- 1. Each cover sheet, subdivision plan, topographic plan, and layout plan and profile shall contain a title block containing the following information:
 - a. Title (Subdivision Name), date of survey and scale, and a bar scale, as required by the Registry of Deeds.
 - b. Name of owner of record and of applicant if other than owner of record.
 - c. Name and address of the Registered Land Surveyor or Registered Professional Engineer.
 - Adjacent to the title block, shall be a block, measuring three and one-half inches (3.5") by three and one-half inches (3.5"), which shall be reserved for use by the Registry of Deeds.
 - e. Each plan and cover sheet shall also have the following statement, together with a location suitable for the preparer's signature, placed upon it: "This plan has been prepared in conformance with the rules and regulations of the Registry of Deeds."

2. Cover Sheet

The cover sheet shall consist of a Locus Plan, at a scale of 1'' = 800', and shall illustrate all streets, lot lines and easements, and shall show the relationship of the subdivision to adjoining property within a radius of a quarter of a mile of the proposed subdivision. A street map or U.S.G.S. quadrangle (or portion thereof) may be used as the basis for the Locus Plan.

- a. Any road designated as a Scenic Road, any land used for Conservation Land or parks, and any land occupied by municipal facilities within this radius, shall be so noted on the locus plan.
- b. If the property that comprises the subdivision or any part thereof has been examined, approved, and confirmed by the Massachusetts Land Court, such information shall be noted on the cover sheet with case numbers and other pertinent references, and the same requirement shall apply to any adjoining parcels of the applicant.
- 3. Subdivision Plan

The Subdivision Plan shall contain all of the following:

- a. North Point.
- b. Existing and proposed lines of streets, ways, easements and any public or common areas within the subdivision. (The proposed names of proposed streets shall be shown in pencil until they have been approved by the Board).
- c. Location, names and present widths of adjacent streets or of streets approaching or within reasonable proximity of the proposed subdivision.
- d. A locus plan at a scale of one inch (1") equals eight hundred feet (800') showing the relationship between the subdivision and adjoining property within a radius of a quarter mile of the proposed subdivision.
- e. Names of all abutters as they appear on the most recent local tax list.
- f. Boundary lines, dimensions and areas of all proposed lots, including all bearings and distances of the property lines, with all lots designated numerically and in sequence. Bounds shall be set along each new lot line at each change in direction or at points sufficient to identify the location of lot boundaries.
- g. Calculation of the upland and wetland area for each proposed lot expressed in sq. ft.
- h. A closed traverse of the perimeter of the subdivision, tied into public and private monuments, shall be shown on the plan. The error of the closure on the perimeter shall be 1:12,000 or better.
- i. Sufficient information to accurately locate existing and proposed streets (including the location, name, and width thereof), ways and easements, as well as their connections to existing streets, ways and easements in the vicinity.

- j. The limit of previous approval by the Planning Board and the date of such approval. If the subdivision adjoins an accepted public way, it shall be so designated (If a public way, the date of acceptance must be shown).
- k. Zoning classification of the land shown on the Plan and the location of any zoning district boundaries, and including the boundaries, if any, of overlay Zoning Districts that may lie within the locus of the Plan.
- l. Notation of flood zone and base elevation data.
- m. Illustration, by broken line, of all setback lines established by the Zoning By-Laws. The Planning Board may require field verification of building setbacks from existing or new property lines.
- n. Location(s) of any easements or rights of way traversing or adjacent to the locus. The Planning Board may require field verification of boundaries of existing or new easements.
- o. All proposed easement(s) for access, utilities, or any other purpose, such as conservation restrictions for proposed open space, shall be shown on the subdivision plan.
- p. Boundaries, if any, of any area(s) which the Conservation Commission has determined to be subject to G.L. c. 131, s. 40 and the Town of Carver Wetlands Protection By-Law. Wetland lines shall be determined through a filing of an Abbreviated Notice of Resource Area Delineation with the Conservation Commission prior to filing an application for a Definitive Plan.
- q. Sufficient permanent physical control points on the perimeter shall be set in the field and identified on the Plan to facilitate the reproduction of the subdivision survey.
- r. Note on Plan. The Board reserves the right to require that a note be placed on the plan and on subsequent transfers of titles stating that lots are subject to a Homeowner's Agreement which assigns to the owners the costs of inspection and maintenance of specified components of the stormwater management and drainage system, and any other specified common amenities, and that these facilities will be operated and maintained by a Homeowner's Association.
- 4. Layout Plan and Profile

The Layout Plan and Profile shall be drawn at a scale of 1'' = 40' horizontally and 1'' = 4' vertically, and shall contain the following:

- a. Lengths, widths, sidelines, centerlines, points of tangency, lengths of tangents, lengths of curves, radii, and intersection angles of all curves for all streets, ways and/or easements.
- b. The proposed horizontal layout of the storm drainage, septic systems and their easements, sanitary sewage facilities, water supply and underground utility systems,

showing their sizes and materials, together with their appurtenances extended to the sideline of each street. All necessary utility easements shall also be shown.

- c. Location of hydrants, street lighting where required by the Board of Selectmen, walks, trees, curbing and similar detail for all proposed streets.
- d. Immediately above or below the layout of each street, a profile showing the following:
 - i. Existing centerline and sideline grades and proposed centerline grades.
 - ii. Existing and proposed ground elevations, based on 1929 NGVD base datum, at the roadway centerline at the top and bottom of all vertical tangent sections and at twenty five (25) foot intervals along all vertical curves.
- iii. The lengths and site distances of all vertical curves.
- iv. The size, location and grade of storm drain, sanitary sewage and other utilities, whether within a roadway or an easement. If a piped utility is not located within the road right-of-way, it shall be shown in a separate profile taken along the centerline of the proposed utility (if more than one utility shares an easement, then the profile shall be along the centerline of the easement).
- v. Invert elevations at all manholes, pipe ends, catch basins, and changes in pipe slope.
- vi. Street gradients shown by figures expressed in percent.
- 5. Topographic and Grading Plan

The Topographic and Grading Plan shall encompass the entire area to be subdivided, together with the area beyond the limits of the subdivision that may be affected by changes in surface runoff resulting from the proposed subdivision, and shall include the following:

- a. Locations of all permanent monuments, identified as to whether existing or proposed.
- b. Natural features and unique cultural features, such as waterways, drainage courses, unique specimen trees, large boulders or ledge outcroppings, stone walls, old wells, and historic structures.
- c. Notation of flood zone and base elevation data.
- d. Locations of existing streets, lot lines and easements, buildings, walks, drives, septic systems and their easements, surface and subsurface drains and other existing features within fifty (50) feet of the sidelines of any street or way.
- e. Existing and proposed contours, developed on 1929 NGVD base datum, shall be shown at two foot (2') intervals, except that one foot contours and spot elevations shall be shown on slopes of 2% or less. Spot grades shall be provided at high points and low points. Spot grades shall also be provided where the slope of the land is less than one percent, as necessary to illustrate the topography of the land.

- f. In order to assess the effect of clearing and changes in elevation on existing drainage patterns, the topographic plan shall include proposed maximum areas of clearing associated with construction of roads, utilities, drainage systems and new homes.
- g. Where areas of fill are known, the location and area of contiguous land proposed to be filled including any proposed mounded septic systems.
- h. Any proposed retaining walls, including the location, height and length of the wall with detail showing the proposed treatment of the exposed surface.
- i. Existing large trees, having a caliper of twelve inches (12") or more, not within an area delineated as "not to be disturbed" (as provided in the following subparagraph) shall be located and identified on the topographic plan.
- j. Natural areas not to be disturbed by the proposed subdivision may be so indicated on the topographic plan.
- k. Where a Preliminary Plan has not been filed and approved, observation pits, as specified by Section 5.4.3, shall be provided. The location of said observation pits shall be subject to the approval of the Planning Board.
- 1. Boundaries, if any, of any area(s) which the Conservation Commission has determined to be subject to G.L. c. 131, s. 40. Wetland lines shall be determined through a filing of an Abbreviated Notice of Resource Area Delineation with the Conservation Commission.
- 6. Landscape Plan

A Landscape Plan prepared and stamped by a Registered Landscape Architect shall be submitted with all applications for a Definitive Plan. The landscape architect should be included in the design process to assure integration of landscaping with other features of the subdivision and to promote the preservation and enhancement of the natural landscape. The Landscape Plan shall show the following:

- a. All proposed landscaping including plantings at the entrance, planted cul-de-sac islands, screening for stormwater management facilities such as detention/retention basins, and other landscaped areas.
- b. All land proposed to remain in an undisturbed, natural state, either through designation as a no-cut zone, subject to a deed restriction or conservation easement, or otherwise intended to be dedicated as open space, with boundaries clearly defined and type of protection indicated by a note on the plan.
- c. Existing and proposed stone walls, existing and proposed fencing, existing and proposed retaining walls, unique specimen trees, existing trees with diameters greater than 12" diameter at breast height (dbh), wooded areas, and other significant vegetation.
- d. The number, size, species and cultivated variety of proposed plantings shall be shown on the Landscape Plan. Plant names shall include both botanical and common names.

- e. Details of the proposed method for planting trees and shrubs shall be shown.
- f. Construction details of proposed retaining wall(s), including location, length, height, and detail of stone facing or other surface treatment.
- g. Specified times for plantings and seeding.
- 7. Erosion and Sedimentation Control Narrative and Plan

In order to ensure that applicant and its contractor shall prevent off-site erosion and sedimentation during construction and during the period of establishment of permanent vegetation, the applicant shall submit a narrative describing proposed erosion and sediment control measures to be used during construction of the project and an accompanying plan showing the locations where these measures will be implemented.

- a. Guidelines for Narrative and Plan. The Erosion and Sedimentation Control Narrative and Plan shall meet all requirements of the Conservation Commission under 310 CMR 10.00, the Town of Carver Wetlands By-Law, the Town of Carver Soil Erosion and Sediment Control By-Law, and shall be consistent with: the design guidelines for erosion and sedimentation of Section 7.4 of these Subdivision Rules and Regulations, the federal NPDES Stormwater Permit program, and the Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas prepared for the Massachusetts Department of Environmental Protection, March, 1997.
- b. Contents of Narrative and Plan. The Erosion and Sedimentation Control Narrative and Plan shall include the following components:
 - i. A narrative, consistent with the erosion and sediment control drawings and details that are included in the Definitive Plan drawings. This narrative may be prepared in report form, or may appear on the drawings, and at a minimum shall contain the following:
 - 1. A brief description of proposed construction activities, and the proposed sequence and schedule of construction. The schedule shall reflect any necessary or proposed phasing of work.
 - 2. A description of erosion and sedimentation measures proposed at different phases of construction, and key milestones for their implementation. The description of these erosion and sedimentation control measures shall identify specific locations for implementation, which shall be shown on the accompanying plan, and may be indicated by number or letter for clear cross-referencing.
 - 3. Proposed erosion and sedimentation measures may include, but shall not be limited to, the following items:
 - a. Prevent tracking of sediment off the site by construction vehicles
 - b. Stabilizing temporary stockpiles of soil materials
 - c. Dust control

- d. Trapping waterborne sediment, such as silt barriers, sediment traps, sediment basins, catch basin inlet protection
- e. Temporary and permanent stabilization at all storm drain or subdrain discharges
- f. Trapping sediment from construction dewatering operations
- g. Temporary stabilization of disturbed areas that will not be permanently stabilized with vegetation or other permanent surface within 30 days of initial exposure
- h. Temporary stabilization of seeded areas while seedlings become established (e.g., mulch, erosion control blankets, etc.)
- i. Responding to erosion and sedimentation contingency events during the course of construction;
- j. Removal of temporary works, disposal of accumulated sediment and debris, and final stabilization of the affected areas at the completion of construction;
- k. Any additional erosion control and/or water pollution control devices or methods.
- ii. A plan shall be submitted, consistent with the narrative, showing the following:
 - 1. Locations of all proposed erosion and sedimentation control measures proposed to meet the objectives of these regulations, including: sediment basins; mulching, matting or temporary vegetation (specify type used for each); hay bales and siltation control fences; and any other methods to be used.
 - 2. Proposed limits of earth disturbance including clearing for all roads, utilities, amenities, and appurtenant structures proposed for the subdivision, and the expected length of exposure time. Where the locations of new homes are known, the limits of disturbance for home construction shall be shown.
 - 3. Location of temporary staging areas.
 - 4. Location of temporary storage for stumps or spoil materials. Such storage shall be in accordance with state and local regulations.
 - 5. Documentation of proper construction and erosion control sequencing, through removal of soil and sediment from the site.
- 8. Details Plans

Details plans shall include construction details for all utilities and appurtenant structures, erosion and sedimentation control measures, retaining walls, and other structures depicted on the plan drawings.

- a. Road construction details should include the Typical Roadway Cross Section as shown in Appendix B, noting any proposed deviations therefrom.
- b. Typical cross sections of all catch basins, manholes, and other utility installations shall conform to the details/typical drawings on file with the Department of Public Works (water, sanitary sewer, storm drains), and to the standards of applicable utility owners (gas, electric, telephone, cable).

6.3.4 Required Supporting Documentation

The following reports or documents shall be submitted with each application for a Definitive Plan:

1. Observation Pits

Information obtained from observation pits as described below shall be submitted with the application for a Definitive Plan. The Board shall consult with the Department of Public Works or its agent in determining the best locations of these observation pits.

- a. Observation pits shall be made in the presence of the Planning Board or its agent.
- b. A detailed description of the soil profile shall be prepared for each observation pit, in accordance with the regulations concerning "deep observation holes" as provided in Title 5 of the State Environmental Code (310 CMR 15.00), prior to submission of a Definitive Plan.
- c. The minimum depths of such pits shall be as follows:
 - i. Roadway Cut Areas: Five (5) feet below proposed grade or to bedrock whichever is less.
 - ii. Roadway Fill Areas: Eight (8) feet below existing grade or to bedrock, whichever is less, except in unstable soils (i.e., peat, muck, etc.) where the minimum depth shall be five (5) feet below hard bottom.
 - Stormwater Detention, Retention, or Infiltration Basins/Recharge Structures:
 Four (4) feet below the bottom of basin or structure, or to bedrock, whichever is less.
 - iv. Other features for which pits are warranted: Depth as approved by the Planning Board.
- 2. Stormwater Management System

A report describing the design of the stormwater management system, and containing calculations supporting the design of the system shall be provided with each application for a Definitive Plan. To evaluate the proposed drainage system, runoff volume and offsite flooding onto abutting properties, calculations of pre- and post-development stormwater

flows from a two, ten and one hundred year, 24-hour design storm shall be provided for the entire subdivision, including catchment areas for detention devices. Calculations shall be performed according to the methodology described in Section 7.3 of these regulations. This report shall indicate whether the subdivision is proposed to discharge to any existing municipal storm drainage system. The following information relating to the design of the drainage system shall be provided with the application for a Definitive Plan:

- a. Soils Data. Where detention basins, retention basins, ponds, or infiltration devices are proposed, the designer shall furnish site specific soils information with the design calculations to document the proper design of these systems. Soils information shall be obtained from test pits or borings performed at the location of each proposed stormwater device, and extending to at least four feet below the bottom of the proposed device. The soils conditions shall be evaluated by a qualified soil scientist or Registered Professional Engineer and witnessed by the town's agent. At a minimum, the information provided shall include:
 - i. A detailed description of soils conditions encountered;
 - ii. Seasonal high groundwater elevation, as characterized by observations of soils color, structure, and other parameters;
- iii. Depth to and description of impermeable or restrictive soil layers, if encountered;
- iv. Depth to bedrock, if encountered;
- v. For recharge (infiltration) systems, the soils at and below the infiltrative surface shall be classified according to USDA standard textural classifications, in order to determine suitable recharge rates for system design. Recharge rates shall be determined from percolation, permeability, or hydraulic conductivity tests appropriate to the soil types.
- b. Watershed Maps. Calculations shall include topographic maps showing the entire drainage area contributing to the subdivision. The maps shall depict the pre- and post-development catchment areas and corresponding outlets from the subdivision. Seven copies of all drainage calculations, and topographic maps illustrating the entire drainage area and showing all sub-area boundaries utilized in said calculations, shall be submitted with the Definitive Plan. c. Information Required for Proposed Use of Municipal Drainage System. Where the subdivision is proposed to drain into an existing municipal system, the Planning Board shall require the applicant to provide documentation of the capacity of the municipal system in the vicinity of the subdivision, and the impact of the proposed subdivision drainage on this system. The applicant is encouraged to discuss the application with the DPW prior to the actual submittal. The applicant is advised that permission of the Department of Public Works is required for tie-in to the municipal system. Proposals must obtain all necessary permits required by the DPW prior to connecting to the system.

3. Fire Protection Water Service

The applicant is encouraged to discuss the application with the Fire Department prior to submittal to the subdivision application to discuss the proposed layout of hydrants and the fire protection system requirements. A fire protection system, as approved by the Fire Department, shall be provided for all subdivisions.

4. Water Supply

The applicant shall provide a statement describing the method of water supply for the project. The Board of Health's approval of the Definitive Plan and any conditions required by the Board of Health shall be provided to the Planning Board not less than forty-five days after the filing of the application for the Definitive Plan. Approval by the Board of Health or its officer shall not be considered as, nor deemed to be approval of, a permit for the construction and use of a water supply well on any lot.

5. Sewage Disposal

The applicant shall provide a statement describing the method of disposal of sanitary sewage from the project. If the project will be served by on-site sewage disposal systems, a copy of the Board of Health's approval of the Definitive Plan and any conditions required by the Board of Health shall be provided to the Planning Board not less than forty-five days after the filing of the application for the Definitive Plan. Approval by a Board of Health or officer shall not be treated as, nor deemed to be approval of a permit for the construction and use on any lot of an individual sewage system; and approval of a Definitive Plan for a subdivision by a Board of Health or officer shall not be treated as, nor deemed to be, an application for a permit to construct or use an individual sewage system on any lot contained therein.

6. Traffic Circulation and Safety

The applicant shall furnish documentation necessary to determine compliance with these regulations, including those concerning street alignment, corner and stopping sight distance, grade, and all others governing location and construction of proposed roads. This documentation shall be in the form of a report prepared by a Registered Professional Engineer with experience in transportation engineering and traffic analysis.

The Planning Board may also require the applicant to provide analysis of the impacts of traffic on the street system serving the subdivision in the form of a report prepared by a Registered Professional Engineer or other qualified professional traffic consultant with

experience in transportation engineering and traffic analysis. Generally, traffic impacts shall be addressed as follows:

- a. Level 1: For a subdivision proposal resulting in less than 30 single-family house lots (or equivalent generation of daily vehicle trips), the applicant shall document that the street design standards specified in these rules and regulations are met by the proposed design. Where indicated by local safety or traffic conditions, the Planning Board may require additional information, in the form of a traffic analysis, as follows:
 - i. The number of average daily and peak hour trips expected to be generated by the subdivision.
 - ii. Average daily and peak hour traffic volumes on roads to be used for access to the subdivision including traffic expected to be generated by anticipated future land uses.
 - iii. Analysis of intersection and road geometry and its effect on traffic convenience and safety.
 - iv. The capacity and level of service of: existing access roads, intersections that will be affected by the proposed subdivision, and proposed roads within the subdivision;
 - v. Recommendations for on- and/or off-site traffic improvements to mitigate traffic impacts at all points of access to the subdivision site, on access roads and at intersections which will be impacted by the subdivision. If the subdivision involves the extension of an existing road, the "point of access" shall be considered the point at which the existing road intersects the nearest through-road serving the project.
 - vi. This analysis shall be performed by a Registered Professional Engineer or other qualified professional traffic consultant with experience in traffic analysis and/or transportation engineering studies.
- b. Level 2: For a subdivision proposal resulting in 30 or more single-family house lots (or equivalent generation of daily vehicle trips), the applicant shall provide the information required for "Level 1," and shall also furnish a traffic impact study prepared by a Registered Professional Engineer or other qualified professional traffic consultant with experience in transportation engineering and traffic analysis. The study shall include all items (#1-5) required for the traffic analysis which may be required for Level 1, above. The study shall further address existing and proposed volumes (daily and peak hour), operations, safety, and mitigation measures (if any) at all intersections at which the subdivision is anticipated to add 25 or more peak-hour vehicle trips.

c. Notwithstanding the above thresholds for traffic impact analysis, the Planning Board may require the applicant to furnish a study of traffic impacts in greater detail, when the Board determines such study to be warranted for the protection of public health, safety, and welfare.

6.3.5. Additional Information That May Be Required

- 1. Before approval of a Definitive Plan is granted, the Planning Board may request additional information in order to evaluate the submission with respect to adequacy of stormwater facilities, adequacy of access, traffic circulation and safety, coordination of improvements with existing municipal road, drainage and sewer infrastructure and other public or private utilities, and compliance with objectives of the Master Plan such as protection of natural, historic and cultural resources, proper provision of affordable housing when proposed, and provision of amenities consistent with neighborhood or community character. To assist the Board in this regard, it may request additional input or review, or completion of studies.
- 2. The applicant shall stake by field survey the approximate locations of the centerline of the proposed roadway, perimeter of proposed stormwater storage and treatment facilities (e.g., detention, retention, or infiltration basins or structures), and locations of any other items deemed relevant by the Planning Board.

6.4 **PROCEDURES**

6.4.1 Review by the Board of Health

When a Definitive Plan of a subdivision is submitted to the Planning Board, as provided in G.L. c. 41, s. 81O, a copy thereof shall also be filed with the Board of Health. The Board of Health shall report, in writing, to the Planning Board, its approval or disapproval of said plan, and shall send a copy of its report to the person who submitted the plan. In reporting a disapproval, the Board of Health shall make specific findings as to which of the lots (if any) shown on the plan cannot be used for building sites without injury to the public health, and shall specify the reasons therefore.

The Board of Health shall also make recommendations for the correction of the defects specified where such correction is possible, in its report. The failure of the Board of Health to make its report within forty-five (45) days after the plan is submitted to its office shall be deemed to constitute an approval of the plan by that Board. A copy of the Board of Health report shall also be submitted to the applicant. When the Definitive Plan shows that no public or community sewer is to be installed to serve any lot thereon, approval by the Board of Health or its officer

shall neither be deemed as an application for a permit nor deemed as approval of a permit for the construction and/or use of an individual sewage system on any lot within the subdivision.

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.

6.4.2 Review by Other Town Officials and Outside Consultants

Following a complete submission of a Definitive Plan, the Planning Board shall distribute copies to those town departments or agencies deemed to have an interest in the proposal, such as the Director of Public Works, Fire Chief, Police Chief, Conservation Commission, and Building Commissioner. The Planning Board will request of each official, board and commission written comments regarding the proposed plan insofar as those aspects which fall under the normal jurisdiction of that official, board or commission, and his/her/their statutory regulations. The Board may elect to schedule an interdepartmental review of the plan of which the applicant will be notified as to time and place.

The Board may request additional information for review from the following sources. Any cost incurred under this Section shall be at the expense of the applicant, with the scope of any studies to be approved and defined by the Board.

- 3. As to protection of natural resources, including groundwater, surface drinking water supplies, rare and endangered species habitat, and similar resources, the Board may request assessments from a professional hydrogeologist, naturalist and/or similar professionals.
- 4. As to the removal or alteration of cultural or historic resources, the Board may request an assessment from a qualified consultant with experience in the assessment of such resources.
- 5. As to traffic circulation and safety, the Board may request a traffic impact study by a Registered Professional Engineer or other qualified professional traffic consultant with experience in transportation engineering and traffic analysis, where due to existing or anticipated traffic conditions, thee is a potential concern regarding traffic safety or ease of access for automobiles or emergency vehicles.
- 6. As to the fiscal impact on the town, including the impacts on schools, the Board may request an assessment from a qualified consultant with experience in the analysis of fiscal impacts of development on cities and towns.

- 7. As to the suitability of the overall design, including proposed landscaping, in the neighborhood where the subdivision is proposed, the Board may request a review by a Registered Landscape Architect, professional planner, or other qualified professional.
- 8. As to the form of the Homeowner's Agreement, other Homeowners' Association documents, legal restrictions on the use of land, easements, covenants, and performance guarantees, the Planning Board may request a review by Planning Board Legal Counsel.

6.4.3 Public Hearing

Upon receipt of a properly executed application form approved by the Planning Board together with the Definitive Plan, the Planning Board will set a date for the required public hearing. Notice of the public hearing shall be given in accordance with the requirements of G.L. c. 41, s. 81T. Before approval of the Definitive Plan is given, a public hearing shall be held by the Planning Board at the expense of the applicant, notice of the time and place of which and of the subject matter, sufficient for identification, shall be given by the Planning Board by advertisement in a newspaper of general circulation in the Town once in each of two successive weeks, the first publication being not less than fourteen days before the day of the hearing. A copy of said notice shall be mailed by the Board to the applicant and to all owners of land abutting upon the subdivision as appearing in the most recent tax list.

All expenses incurred for plans, surveys, advertisements of hearings, mailing, etc. shall be the responsibility of the applicant submitting said plans for approval, and shall be billed directly to the applicant or shall be taken from a cash deposit. The balance of which shall be forwarded to the applicant at the completion of the review process.

6.4.4 Revisions

Any revision to the originally filed definitive plan must be submitted 14 days prior to the continuation of the hearing. Each revision shall include all plan sheets originally submitted, with the revision date noted on the plan.

6.5 PLANNING BOARD ACTION

6.5.1 Powers

After the public hearing, the Board, by a vote of the majority of its members, shall approve, modify and approve, or disapprove the Definitive Plan submitted. Criteria for action by the Board shall be the following:

1. Completeness and technical adequacy of all submissions.

- 2. 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.
- 3. Conformity with the requirements of Sections 6.0 and 7.0 herein, and the Zoning By-Law.
- 4. Determination 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.

6.5.2 Decision

The action of the Board with respect to any Definitive Plan shall be by vote, copies of which shall be filed with the Town Clerk and sent by registered mail to the applicant. If the Planning Board modifies or disapproves such plan, it shall state in its vote the reasons for its action and shall rescind such disapproval when the plan has been amended to conform to these Rules and Regulations and to the recommendations of the Board of Health.

Any vote of approval shall incorporate the recommendations of the Board of Health and, unless the Planning Board shall specifically vote otherwise, shall be subject to compliance with all provisions of the Subdivision Rules and Regulations.

6.5.3 Endorsement

Final approval, if granted, shall be endorsed on the original drawing of the Definitive Plan by the signatures of a majority of the Planning Board but not until the statutory twenty (20) day appeal period has elapsed following the filing of the certificate of approval or disapproval of the Planning Board with the Town Clerk and said Town Clerk has notified the Planning Board that no appeal has been filed.

Endorsement shall be subject to compliance with the construction specifications contained herein and the decision, compliance with the Rules and Regulations and the Zoning By-Law, and compliance with the recommendations of the Board of Health. Prior to endorsement of the Definitive Plan, the applicant shall submit a CD or diskette containing the contents of the layout plan, subdivision plan and topographic plan sheets of the final version of Definitive Plans, produced by an Autocad or similar computerized drafting system, in either Autocad Drawing Format (.dwg), Data Exchange Format (.dxf) or ESRI Interchange Format (.e00), registered to Massachusetts State Plane (Mainland) Coordinates, North American Datum of 1927 or 1983. Orthophotos available from Mass GIS may be used in registering data. If the applicant is unable

to provide the above, a fee determined by the Board will be charged to cover the cost of digitizing the plan.

6.5.4 Recording

Following endorsement, the Board shall, within six (6) months of such approval, file such plan with the Plymouth County Registry of Deeds, and shall transmit prints of the endorsed plan to the appropriate Town Boards and Commissions. The Board will not file such plan, however, until it has received from the applicant two certified checks, one in an amount sufficient to obtain one (1) mylar reproducible and ten (10) prints of each sheet thereof, and one in an amount sufficient to cover the costs of the filing of such plan with the Registry of Deeds.

6.6 MANDATORY CONDITIONS

6.6.1 Failure to Obtain Endorsement

The applicant shall obtain the endorsement of the Planning Board upon the Definitive Plan within 180 days of the date of approval or termination of the appeal period. Failure to obtain such endorsement shall result in the automatic rescission of the approval of such plan.

6.6.2 Failure to Complete Construction

The subdivider shall complete the construction of all ways and municipal services within three years of the date of endorsement of the Definitive Plan. Failure to so complete shall result in the automatic rescission of the approval of such plan, unless the Board extends said period, for good cause shown, after the written request of the applicant prior to the expiration of said period.

6.6.3 Construct Streets and All Required Utilities

As a condition of approval of a subdivision, the applicant shall agree to construct streets and complete all other work specified on the Definitive Plan or required under these Rules and Regulations, meet all relevant provisions of the Carver Zoning By-Laws and other By-Laws, including installation of all required utilities in such subdivision, and all work incidental thereto, such as grading of lots to provide drainage, construction of retaining walls and other details, as outlined in Section 7.0 of these Rules and Regulations or as specifically required by the Planning Board. The Planning Board may require that such construction be completed within a specified period of time.

6.6.5 Right of Entry and Cooperation by and with Town Officials

As a condition of approval of a subdivision, and in accordance with G.L. c. 41, s. 81B, the applicant shall consent to allow members and employees of the Planning Board and other persons acting under the authority of the Planning Board as its agents, to enter upon any lands and carry out such surveys and inspections as may be deemed necessary, and place and maintain monuments and marks. As a condition of subdivision approval by the Planning Board, an applicant shall cooperate with the Planning Board and Town officials and assist them in their efforts to verify that the layout, design and construction work in his subdivision are satisfactory and conform to the Town specifications and the requirements of the Planning Board.

6.6.6 Maintenance of Streets and Utilities

As a condition of approval of a subdivision, the applicant shall maintain all streets and utilities within a subdivision, with the exception of water service. The Town may assess betterments for any work needed to make such streets conform to Town standards prior to acceptance thereof as Town ways. Street acceptance by the Town shall generally be limited, as to drainage, to the storm drainage system within the street layout. Until a street within a subdivision is accepted by Town Meeting as a public way, all streets, those portions of drainage systems within the street layout, and other improvements within the street layout shall be operated and maintained by the developer or a Homeowner's Association made up of the residents of the subdivision or their representatives.

6.6.7 Streets

Approval of the Definitive Plan does not constitute the laying out or acceptance by the Town of Carver streets shown on the Plan.

6.6.8 Modification of Approved Plan

Any modification of an approved Definitive Plan, other than as authorized by G.L. c. 41, s. 81O, shall require modification by the Planning Board of the approved plan in accordance with G.L. c. 41, s. 81W. Failure to comply with this requirement shall result in rescission of the Planning Board's approval.

6.6.9 Required Approvals of Other Governmental Agencies

Where a Definitive Plan requires approval, permitting or licensing from any local, state or federal agency, this approval, permitting or licensing will be deemed a condition of the Planning Board's approval.

6.6.10 Inscription

If the Planning Board approves the plan subject to certain conditions, those conditions shall be inscribed upon the approved definitive plan.

6.7 FAILURE TO COMPLY WITH CONDITIONS

Failure on the part of the applicant, his agent, or contractor to comply with any condition or restriction established by the Board in regard to a Form C plan shall be dealt with in the following manner:

- 1. The Board, through its staff, shall have the authority to enforce the conditions of the Board's approval of the plan.
- 2. Infractions deemed by the Board or its staff minor in nature, shall result in the applicant being notified of such infraction and directed to take corrective action.
- 3. Repeated infractions or infractions deemed by the Board or its staff to be major or having a direct impact on health, safety and welfare or upon the integrity of the rules and regulations of the Board, shall result in an immediate Stop Work Order being issued at the project site by the authorized staff, and notification by certified mail of such action to the applicant.
- 4. A Stop Work Order with certified notice of action shall require the applicant and the agent who issued said Order to appear before the Board at a public meeting for a determination of facts and subsequent action by the Board to secure health, safety and welfare, and compliance with these rules and regulations.

6.8 SECURITY

Pursuant to G.L. c. 41, s. 81U, before endorsement of the Board's approval of a Definitive Plan, the applicant shall secure the construction of ways and installation of municipal services in an amount sufficient to cover the cost of all or any agreed upon portion of such construction and installation and of the subdivision improvements specified in Section 8.0 of these regulations or as may be shown on the Definitive Plan.

6.8.1. Bond or Surety

Prior to the endorsement of the Definitive Plan, the subdivider may elect to file a performance bond, or deposit money or negotiable securities in an amount determined by the Board as set forth below. Letters of credit are not acceptable. All surety shall be accompanied by a form assigning same to the Town of Carver, which may be obtained from the Planning Board office. Such bond or security, if filed or deposited, shall be approved as to form 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 at least thirty (30) days prior to the expiration of said period.

- 1. Amount. 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 to complete the work; plus
 - b. A ten percent margin of error; plus
 - c. Sufficient funds to cover potential future costs based on an appropriate rate of inflation over a five year period.
- 2. Required Terms. All performance bonds shall contain the following provision: If the Principal shall fully and satisfactorily observe and perform in accordance with the qualifications and time schedule set forth herein specified all the covenants, agreements, terms and provisions set forth in the following:
 - a. The application for Definitive Plan approval (Form C).
 - b. The subdivision control law and the rules and regulations of the Carver Planning Board which govern this subdivision.
 - c. The Decision of the Planning Board dated and attached hereto as Exhibit A.
 - d. The Definitive Plan, as approved by the Planning Board in the Decision; then this obligation shall be void; otherwise, it shall remain in full force and effect and the aforesaid sum shall be paid to the Town of Carver as liquidated damages.
- 3. Additional Information Required. All performance or surety bonds must be accompanied by:
 - a. A letter on company letterhead of the bonding company stating that the individual signing is authorized to sign on behalf of the bonding company.
 - b. A letter from any bonding company not headquartered in Massachusetts identifying a local process server.

6.8.2. Statutory Covenant

Prior to the endorsement of the Definitive Plan, the subdivider may elect to submit a covenant for review by the Planning Board stating that no lot in the subdivision shall be sold and no building shall be erected thereon until the improvements specified in the decision and on the Definitive Plan are constructed and installed so as to adequately serve said lot or lots. Such covenant shall be approved as to form by the Planning Board Legal Counsel. Such covenant shall be executed and duly recorded by the owner(s) of record, and shall run with the land.

Such covenant shall state that the improvements shown on the definitive plan shall be completed not later than three years from the date of the endorsement of the Definitive Plan. Failure to so complete the improvements 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. The covenant shall be referenced on the Definitive Plan prior to recordation 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.

6.8.3. Supplemental Covenant

The Planning Board may require, prior to the endorsement of the Definitive Plan, a supplemental covenant containing those conditions of approval that are intended to survive the release of the Statutory Covenant. Such covenant shall be approved as to form by the Planning Board Legal Counsel. Such covenant shall be executed and duly recorded by the owner(s) of record, and shall run with the land. The covenant shall be referenced on the Definitive Plan prior to recordation 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.

6.8.4. 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, the applicant shall submit a formal written request to the Planning Board by registered mail, which sets forth and includes:

- 1. Extent. 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.
- 2. Estimate. An estimate, pursuant to these Rules and Regulations, which reflects all remaining costs related to the construction of all required ways and installation of all required municipal services.
- 3. Form and Type. The form and type of guarantee being given to the Planning Board to secure all remaining improvements.
- 4. Planning Board Action. 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.

6.8.5. 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 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.

6.8.6. Maintenance Guarantee

A maintenance guarantee providing surety equal to (10%) of the total value of work within the subdivision which has been subject to either a bond and/or covenant, to be held in same manner as the performance guarantee required herein. Such maintenance guarantee shall be held by the Town for the maintenance of streets and municipal services for eighteen (18) months after completion of construction and installation or until the streets are accepted by the Town, whichever comes first, after which date the Town shall return the remainder of the bond to the person or persons who furnished same.

Approximately sixty (60) days before the expiration of the eighteen (18) month period specified above, the Planning Board shall request its engineer to make an inspection of said street or ways or portion thereof to determine whether or not it should recommend to the Board of Selectmen the laying out of said street or way or portion thereof as a public way. If the recommendation is in the affirmative, the Planning Board shall so advise the Board of Selectmen forthwith, including in such recommendation notification that the eighteen (18) months for which the applicant is responsible for maintenance of said way or portion thereof will expire on a certain date and said way may be laid out as a public way.

Upon the expiration of the period for which the applicant is responsible for maintenance of said way, if said applicant has complied with all the requirements of the Planning Board, and surety held by said Board for the maintenance of said way shall be returned forthwith to the applicant.

6.9 AMENDMENT, MODIFICATION OR RESCISSION OF APPROVAL

Pursuant to G.L. c. 41, s. 81W, the Planning Board may, upon its own motion or upon the request of the applicant, amend, modify or rescind the approval of a Definitive Plan. Failure to comply with these Rules and Regulations and with the specifications and conditions set forth in the approval of the Definitive Plan shall constitute a basis for such action by the Planning Board. Such action may include the realization upon any security posted by the applicant, the rescission of subdivision approval and all other measures provided by law. No changes or alterations shall be made to any aspect of an approved Definitive Plan without resubmission for approval of the Planning Board in accordance with General Laws, Chapter 41, Sections 810 and 81W.

6.10 MODIFICATION OF DEFINITIVE PLAN

6.10.1. Procedure

The procedure for the modification of a Definitive Plan, pursuant to G.L. c. 41, s. 81W, shall conform to the requirements for approval of an original Definitive Plan as set forth herein.

6.10.2. Change of Lot Lines

Pursuant to G.L. c. 41, s. 81O, certain changes of lot lines may be approved by the Planning Board without a public hearing.

6.10.3. Effect

The modification of a Definitive Plan shall not affect lots sold or mortgaged by the applicant in accordance with G. L. c. 41, s. 81W.

6.10.4. Approvals by Other Agencies

When a Definitive Plan is subject to subsequent approvals, such as those of the Conservation Commission, Board of Health, or any other local, state or federal agency, and the subsequent approvals require modification(s) other than those allowed by G.L. c. 41, s. 81O, the applicant shall modify the plan pursuant to G.L. c. 41, s. 81W.

6.11 RELEASE OF PERFORMANCE GUARANTEE

6.11.1. General

Upon completion of required improvements, security for the performance of which was given by the bond, deposit, or covenant, or upon the performance of any covenant with respect to any lot, the applicant, at his expense, shall send by Registered or Certified Mail to the Town Clerk and the Planning Board a written statement that the said construction or installation which has been secured in connection with such bond, deposit, covenant or agreement, has been completed in accordance with the requirements contained within these Rules and Regulations. Such statement shall contain:

- 1. Name and address of applicant.
- 2. A Compliance Certificate signed by the applicant and signed and sealed by his Engineer stating that the development has been completed according to the Rules and Regulations of the Planning Board and the By-laws of the Town of Carver.
- 3. Copies of or reference to the requisite number of Inspection Forms and Reports.
- 4. An As-built Plan (see below).
- 5. A written certification by the Planning Board's engineer that construction of all ways and sidewalks, installation of monuments, street signs, pavement, lighting, gutters and curbs, required grading and drainage, water mains, hydrants and appurtenances, all sewer mains and appurtenances and planting and seeding has been completed in accordance with the Definitive Plan.
- 6. A written certification by the Fire Department that fire protection systems, emergency facilities, and access have been constructed in accordance with the Definitive Plan.
- 7. A written certification by the Board of Health that the installation of sewage disposal facilities, if applicable, and provisions for surface drainage of all lots has been performed in accordance with the Definitive Plan and the requirements of the Board of Health.
- 8. A written certification by the Conservation Commission that all work including any required improvements has been performed in accordance with any applicable Orders of Conditions or other requirements.
- 9. Copies of or reference to the necessary instruments, executed by the applicant, transferring to the Town all utilities and easements as shown on the Definitive Plan (see below).

6.11.2. Refusal

If the Planning Board determines that said construction or installation has not been completed, it shall specify to the Town Clerk and to the applicant in writing by Registered or Certified mail, return receipt requested, the details wherein said construction and installation shall have failed to comply with the requirements contained within these Rules and Regulations.

6.11.3. Constructive Release

Upon failure of the Planning Board to act on such application within forty five (45) days after receipt thereof by the Town Clerk and the Planning Board, all obligations under the bond shall cease and terminate by operation of law, and any deposit shall be returned and any covenant shall become void. In the event that said forty five (45) day period expires without such specification, or without the return of the deposit or release of the covenant as aforesaid, the Town Clerk shall issue a certificate to such effect, duly acknowledged, which may be recorded.

6.11.4. Conveyance of Utilities and Easements to the Town

Prior to the release by the Planning Board of a surety bond or deposit, or, in the case of a covenant, the issuance of a Release Form, the applicant shall execute an instrument, on a Form approved by the Planning Board, transferring to the Town, without cost, valid unencumbered title to all common sewers, storm drains and water mains, and appurtenances thereto, constructed and installed in the subdivision in the specific portion thereof to be approved, which in most cases shall be limited to those within the road layout, and conveying to the Town without cost and free of all liens and encumbrances, perpetual rights and easements to construct, inspect, repair, renew, replace, operate and forever maintain the aforesaid underground utilities, with any manholes, pipes, conduits and other appurtenances, and to do all acts incidental thereto, in, through and under the whole of all streets in the subdivision or portion thereof to be approved, and if any such utilities have been constructed and installed in land not within such streets, then in, through and under an easement as shown on the Definitive Plan.

6.11.5. As-Built Plans

The following as-built plans and profiles, prepared by a Registered Professional Engineer or Registered Land Surveyor, shall be submitted to the Planning Board following the completion of construction and, in addition, at such time during the course of construction as required by the Director of Public Works. The applicant's engineer of record shall provide a stamped certification to the Department of Public Works and the Planning Board that all construction conforms to the As-Built Plans. Detailed checklists for the items required are available from the Department of Public Works. A completed checklist must be submitted for each item.

1. A street layout plan, clearly and legibly drawn with waterproof ink upon linen, mylar, or their equivalent, at a scale of 1"=40', in form approved by the Planning Board's engineer as suitable for submission to the Town Meeting for street acceptance for purposes and for filing in the Plymouth County Registry of Deeds.

- 2. A plan and profile, clearly and legibly drawn with waterproof ink upon linen, mylar, or their equivalent, or prepared on another suitable, permanent reproducible material, at a scale of 1"=40', detailing street locations, house locations, if any, and grades and the location and elevation of all underground utilities and appurtenances, including rim grades, percent of slope for sewer and drain lines, and contours, of two foot (2') intervals, for a distance of forty feet (40') from the sideline of any street layout, utility easement, the boundaries of any Flood Plain and Watershed Protection, and/or the boundary of any area which the Conservation Commission has previously determined to be subject to General Laws, Chapter 131, Section 40, "as built."
- 3. The Engineer shall obtain, from actual field survey and other sources as may be necessary, such information as is necessary to properly identify any "as built" locations of all underground utilities.
- 4. The applicant shall submit a CD or diskette containing the As-Built Plan, produced by an AutoCAD or similar computerized drafting system, in either AutoCAD Drawing Format (.dwg), Data Exchange Format (.dxf) or ESRI Interchange Format (.e00), registered to Massachusetts State Plane (Mainland) Coordinates, North American Datum of 1927 or 1983, as part of the application for endorsement of the plan. Orthophotos available from MassGIS may be used in registering data. A copy of the plan shall also be provided in Adobe Portable Document Format (.pdf). If the applicant is unable to provide the above, a fee determined by the Board will be charged to cover the cost of digitizing the plan.

SECTION 7.0 DESIGN STANDARDS

7.1 GENERAL

All proposed building lots shown on a Subdivision Plan submitted to the Board for approval shall contain at least the minimum area and frontage required by the Zoning District in which the land is located. The Planning Board encourages the use of low-impact development (LID) techniques and practices to minimize the effects on the environment. The Board shall consider the benefits of LID practices when reviewing subdivision waivers and design features that maintain the character of the Town of Carver and protect its natural resources.

7.2 LOTS

1. Driveways

Driveways shall provide access to each lot in the subdivision and shall not exceed a grade of 12% and shall provide vertical clearance of at least 13'-6". Leveling areas 25 feet long shall be provided at intersections with the paved street edge. Driveways greater than 75 feet in length, measured from the paved street edge to the dwelling, shall be at least 12 feet wide, shall have an all-weather surface, and shall be cleared of obstructions to a distance of two feet on both sides. Centerlines shall have a minimum radius of 100 feet. Refer to Section 7.3.7. for dimensional requirements of driveways and curb cuts.

- 2. Public Safety Requirements
 - a. Sprinkler systems shall be installed in dwellings consisting of two or more connected units.
 - b. Suitable, standardized house numbers shall be displayed on posts, lamp posts, or other approved device adjacent to the driveway serving the dwelling and the street line of the lot (Ref. Carver By-Laws Chapter 6 Section 6.8.5).
 - c. A minimum 30-foot fire protection buffer shall be maintained between buildings and the edge of woods for wildfire protection.

7.3 STREETS

Subdivisions shall be designed such that, in the opinion of the Planning Board, the subdivision has adequate access from the existing street system, and the subdivision has adequate vehicular and pedestrian access and circulation within the subdivision. Subdivisions for industrial and commercial uses shall be designed to accommodate heavy truck traffic and shall, at a minimum,

comply with the specifications of a Secondary Street and dimensions of the Industrial and Commercial cul-de-sac detail in Appendix B.

1. Location

All streets in the subdivision shall be designed so that, in the opinion of the Board, they will provide safe vehicular and pedestrian travel, a minimum of impact on the natural environment and an attractive street layout in order to obtain the maximum safety and amenity for future residents of the subdivision, and they shall be in accord with these Rules and Regulations of the Planning Board.

The proposed streets shall conform in location, so far as practicable, to any existing plans of the Planning Board, to the Master Plan or parts thereof adopted by the Planning Board and, where required by the Board, to the existing street system. In addition, all new street layouts shall meet the following requirements:

- a. Provision satisfactory to the Planning Board shall be made for the proper projection of streets or for access to adjoining property, whether or not subdivided.
- b. The Planning Board may require the installation of bikeways and/or walkways to provide access within a subdivision or between a subdivision and adjoining properties.
- c. Minor streets shall be so located and designed as to discourage their use by through traffic.
- d. Streets shall be continuous and in alignment with existing streets, as far as practicable, and shall comprise a convenient system with connections adequate to insure free circulation of vehicular travel.
- e. Reserve strips prohibiting access to streets or adjoining property shall not be permitted, except where, in the opinion of the Planning Board, such strips shall be in the public interest.
- f. No road may be constructed over a soil absorption system or septic system structural component other than a forced main or transport pipe.
- 2. Alignment

To ensure the maximum safety and amenity for future residents of the subdivision and the Town, all streets in the subdivision shall be designed so that, in the opinion of the Board, they will provide the following:

a. Streets entering opposite sides of a minor or secondary street shall be laid out either directly opposite one another, or with a minimum offset of one hundred twenty-five (125) feet between their centerlines.

- b. Streets entering opposite sides of a major street shall be laid out either directly opposite one another, or with a minimum offset determined on the basis of a traffic analysis by a qualified professional engineer registered in Massachusetts. The analysis shall include, but not be limited to, evaluation of sight distances, horizontal and vertical alignment of the existing and proposed streets, and prevailing speeds on the existing street. In any case, the offset shall not be less than two hundred fifty (250) feet.
- c. Streets entering on the same side of a minor or secondary street shall be offset a minimum of two hundred fifty (250) feet between their centerlines.
- d. Streets entering on the same side of a major street shall be offset a minimum distance determined on the basis of a traffic analysis by a professional engineer registered in Massachusetts, as described in Paragraph b., above. In any case, the offset shall not be less than 250 feet.
- e. Streets shall be laid out so as to intersect as nearly as possible at right angles, and no street shall intersect any other street at less than sixty (60) degrees.
- f. All reverse curves on major and secondary streets shall be separated by a tangent at least one hundred (100) feet long.
- g. Street right-of-way lines at intersections shall be rounded to provide a radius of not less than forty (40) feet. The radius of the edge of pavement at any intersection shall be sufficient to provide for adequate access by truck traffic expected for the type of subdivision and for access by fire protection equipment, as determined by the Fire Department, but in no case shall be less than thirty (30) feet.
- h. The minimum centerline radii of curved streets shall be as follows:
 - i. Minor Streets: one hundred fifty (150) feet.
 - ii. Secondary Streets: four hundred (400) feet.
 - iii. Major Streets: five hundred (500) feet.
 - iv. Road alignments should be designed to minimize the total amount of grading and the area of clearing that will be necessary for construction.
- 3. Sight Distance
 - a. The minimum sight distance at street intersections shall be the *stopping sight distance* as recommended by AASHTO's *A Policy on Geometric Design of Highways and Streets*, latest edition, based on the 85th-percentile vehicle speed for existing roads and the design speed for proposed roads. Reasonable diligence shall be made to provide the *intersection sight distance*, as recommended by AASHTO, which may include improvements to public streets or infrastructure. The Board shall determine whether the improvements that are necessary to obtain intersection sight distances are practicable and reasonable based on the scope of the project.
 - b. Sight distance shall be provided within street lines. Easements shall not be used for the purpose of maintaining sight distance.

- c. All changes in grade exceeding five tenths (0.5) of one percent shall be connected by vertical curves of sufficient length to afford the minimum AASHTO stopping sight distances based on design speed and grade of the street, but shall not be less than:
 - i. Minor Streets: one hundred and fifty (150) feet.
 - ii. Secondary Streets: two hundred and fifty (250) feet.
 - iii. Major Streets: five hundred (500) feet.
 - iv. In no case shall any vertical curve be less than one hundred (100) feet in length.
- 4. Street Width

Table 1, *Table of Street Dimensions*, showing pavement width, layout width, location of sidewalks, and other typical horizontal dimensions for streets of different classifications is provided in Appendix B.

- a. The minimum width of street rights of way shall be as follows:
 - i. Minor Streets: forty (50) feet
 - ii. Secondary Streets: fifty (50) feet
 - iii. Major Streets: sixty (60) feet
- b. In extending a street from one of a different width, the adjustment shall be gradual and subject to the approval of the Planning Board.
- c. Except as provided in paragraph b. above, the side lines of all streets, rights of way, and easements shall be parallel unless otherwise specified by the Planning Board.
- 5. Grade
 - a. The centerline grade for any street shall not be less than three quarters (0.75) of one percent.
 - b. The maximum centerline grades shall be as follows:
 - i. Minor Streets: nine (9) percent
 - ii. Secondary Streets: eight (8) percent
 - iii. Major Streets: six (6) percent
 - c. The centerline gradient shall not exceed six (6) percent on any horizontal curve.
 - d. The centerline gradient shall not exceed six (6) percent within five hundred (500) feet of a dead end.
 - e. The centerline gradient of a cul-de-sac or turnaround and the centerline grade within 150 feet of the centerpoint of a cul-de-sac or turnaround shall not exceed two (2) percent.

- f. Streets shall not intersect another street at a gradient in excess of two (2) percent for a distance of at least one hundred (100) feet from the intersection of the street centerlines.
- g. Low points in street profiles shall not be located in cut areas.
- 6. Dead End Streets
 - a. For the purpose of this paragraph, any proposed street which intersects solely with a dead end street shall be deemed to be an extension of the dead end street.
 - b. Dead end streets shall not be longer than six hundred (600) feet measured along the center line from the edge of the layout of the road from which they are entered to the endpoint of the cul-de-sac as shown on the cul-de-sac detail in Appendix B, or the endpoint of the turnaround for dead-end streets lacking a cul-de-sac.
 - c. Such streets shall have provided at the closed end a cul-de-sac of dimensions shown on the cul-de-sac detail in Appendix B and in no case having dimensions less than that which is determined necessary by the Planning Board for the turning of emergency vehicles, school buses, or trucks as required for the type of subdivision.
 - d. Landscaped island shall have a minimum diameter of twenty (20) feet; shall in no instance reduce the minimum width of pavement to less than required by the Typical Cross Section; shall not impede the turning of emergency vehicles and school buses in the cul-de-sac, and shall have curbing along its entire circumference.
 - e. The Board may require a roadway and/or utility easement from the end of the dead-end street to accommodate any projection thereof provided for under this section.
 - f. When a Definitive Plan shows a proposed extension of a street which previously ended in a cul-de-sac or turnaround, the Board may require removal of excess pavement in the cul-de-sac and other improvements deemed necessary for the function and appearance of the extension as a condition of approval of the Definitive Plan subject to approval by the Board of Selectmen if required.
- 7. Curb Cuts
 - a. Driveways serving one dwelling shall be at least 10 feet and not more than 14 feet wide, shall have an opening at the gutter line of at least 16 feet and not more than 22 feet, and, where curbing is required, a sloped curb at the intersection with the roadway.
 - b. Driveways serving two (2) dwellings shall be 22 feet wide, shall have an opening at the gutter line of at least 34 feet, and, where curbing is required, a sloped curb at the intersection with the roadway.
 - c. Driveways serving more than two dwellings shall be 24 feet wide, shall have an opening at the gutter line of at least 36 feet and not more than 54 feet, and, where

> curbing is required, shall have a curb return at the roadway with a radius of at least six (6) feet. The Fire Department may determine that a Fire Access Road, conforming to the latest edition of the National Fire Protection Association's (NFPA) NFPA 1: Uniform Fire Code, is required to service multiple dwellings.

- d. Where no curbs exist, the driveway flare shall have a radius of six (6) feet.
- e. Driveway cuts shall not be located within sixty five (65) feet of the intersection of the nearest tangent lines of intersecting streets.
- f. There shall be a grade from the edge of the street right of way to the edge of the pavement of not less than one (1) percent and not more than eight (8) percent, but the grade between the sidewalk and the right of way shall be only as shown on the Typical Roadway Cross Section in Appendix B.
- g. Curb cuts shall be located to allow construction of driveways without crossing over a soil absorption system or septic system structural component other than a forced main or transport pipe.
- 8. Curbing

In all subdivisions, Cape Cod berm shall be installed along each edge of the roadway in all streets. Granite curb may be required where appropriate or desirable, such as along the edge of islands.

- 9. Sidewalks
 - a. Sidewalks shall be constructed beside the roadways within a subdivision, as shown on the Typical Cross Section, as follows:
 - i. Minor Street: On one side only.
 - ii. Secondary Street: On both sides near schools and other generators of pedestrian travel or as determined by the Board.
 - iii. Major Street: On both sides.
 - b. Sidewalks shall have a finished grade in relation to the finished grade of the roadway as shown on the Typical Cross Section for streets of similar type and width.
 - c. No utility poles or trees shall be placed within the grass plot so as to be closer than two (2) feet from the edge of the roadway or shoulder, if any. In those instances where only one (1) sidewalk is provided, utility poles would normally be placed on the side opposite the sidewalk, as shown on the Typical Roadway Cross Section in Appendix B, except where guying and clearance requirements result in a pole(s) on the sidewalk and/or both sides of the street.
- 10. Accessibility

- a. Sidewalk ramps, where sidewalks are required, designed and constructed in accordance with the Rules and Regulations of the Massachusetts Architectural Access Board (521 CMR 21) shall be provided at all intersections, with the exception that sidewalk widths shall be at least five (5) feet, as specified in these Subdivision Rules and Regulations.
- b. Where sidewalks are constructed, a three (3)-foot width shall be maintained without obstructions in order to accommodate wheelchairs, strollers and comfortable pedestrian traffic.

7.4 UTILITIES

All utilities shall be installed at the time of initial construction in accordance with the following:

7.4.1. Storm Drainage

1. General Approach

A complete storm drainage system, designed to the satisfaction of the Board, shall be so laid out and of sufficient size as to permit unimpeded flow of all natural waterways, to provide adequate drainage of all portions of the street system so that water does not accumulate thereon, to intercept storm water runoff from the adjacent lots of the subdivision, and to prevent adverse impacts due to stormwater discharges from the subdivision.

Stormwater from each lot shall be recharged to the maximum extent feasible and as near to the runoff source as practicable. Open drainage systems that provide a high level of infiltration, require little maintenance, and result in a minimum of clearing and grading (such as grassed swales or undisturbed natural areas suitable to absorb stormwater) are generally considered superior to closed drainage systems. A system of multiple smaller drainage systems is preferable to a single larger drainage facility.

2. Design Basis and Method

Drainage systems shall be designed to comply with the following:

- a. Where the collection system conveys flows to a detention/retention system designed to control the one hundred (100) year storm, the designer shall document how flows in excess of collection system capacity will be safely directed to the control device.
- b. Calculations for the analysis of pre- and post-development peak flows at the property line and at other critical locations, and for the design of detention/retention devices,

shall be developed using the Natural Resource Conservation Service (NRCS) TR-20 methodology, unless otherwise authorized by the Planning Board.

- c. The development of runoff coefficients (e.g., for the Rational Method) and Runoff Curve Numbers (e.g., for TR-55 and TR-20 methodology) for post-development conditions shall be based on the assumption that the contributing watershed will be fully-developed, including the following conditions:
 - i. Proposed lots shall be assumed to be covered by homes and accessory structures, paved drives and walkways, and grassed lawns. For purposes of drainage analysis, at least 50% of the lot area shall be assumed to be in a "developed" condition.
 - Where the applicant demonstrates to the satisfaction of the Board that a
 portion of the subdivision will be permanently preserved in its natural
 condition, a post-development runoff coefficient or curve number
 corresponding to that natural condition may be used in the calculations.
 Otherwise, the coefficient or curve number for "grassed lawn" shall be used
 for pervious areas.
 - Runoff coefficients and curve numbers for off-site areas contributing to the Subdivision's drainage system shall be estimated assuming full development of those areas, consistent with the Carver Zoning By-Law and these Rules and Regulations.
- d. All stormwater system components shall be designed accounting for hydraulic losses through the system, including inlet losses, outlet losses, and losses through hydraulic structures. Drainage design shall account for anticipated tailwater conditions.
- e. Federal, State and Local Design Requirements

Drainage design shall be consistent with the Massachusetts Department of Environmental Protection Stormwater Management Policy, the federal NPDES Stormwater Permit program, Town of Carver Board of Health *Regulations for Storm Water and Runoff Management*, the Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas prepared for the Massachusetts Department of Environmental Protection, March, 1997, Army Corps of Engineers, and all other Town of Carver By-Laws governing disposal of stormwater in the Water Resource Protection District.

f. Separation between Infiltration Devices and Septic Systems

> A note shall be added to the plan citing use and general location of dry wells, roof leaders and other individual on-site stormwater management systems in order to facilitate adequate separations for septic systems. Infiltration systems shall be located away from any septic system component and private well in accordance with Carver Board of Health regulations. Greater setbacks may be warranted, depending on hydrogeologic conditions.

g. Discharge onto Abutting Lots

After full construction of the subdivision including all buildings, paved areas, and new landscaping, peak stormwater flows at the boundaries of the development shall not exceed peak flows prior to development measured in the same locations, based on the two- (2), ten- (10), twenty-five- (25), and one hundred- (100) year, twenty-four hour design storms.

Stormwater volumes shall also be controlled so that if they exceed the volume prior to development at the same location based on the design storm there will be no increased negative impact on the abutting properties. In reviewing the function of a proposed drainage system, the Board may consider the effect of the system at existing off-site flow restrictions, within a reasonable distance of property boundaries. No flow shall be conveyed over town ways, or over land of others except for existing natural flows, unless a drainage easement therefore is obtained prior to approval of the Definitive Plan.

h. Discharge to Wetlands

Existing wetlands cannot be used for stormwater treatment. However, where groundwater and surface water hydrology permit, and conditions favor creation of functional wildlife habitat, created wetland stormwater systems are encouraged.

i. Wet Basins

Where detention basins are proposed to hold water for longer than forty-eight hours, the proposal must show how mosquito and insect control will be addressed.

j. Use of Natural Areas for Infiltration

The following methods for protecting natural drainage areas are encouraged for increased stormwater infiltration and erosion control, and may be required if determined to be necessary to reduce the volume of stormwater that must be routed through detention/retention system, to decrease stormwater flows off the site, to increase absorption of runoff on the site, or to reduce erosion and control sedimentation within natural or man-made drainage systems:

- i. Restriction of land clearing to defined areas necessary to accommodate new streets, utilities and dwellings. Area for homes sites within the lots shall not be cleared until a building permit is obtained. The Planning Board may require that stakes be set to mark the boundaries of areas to be cleared, and that these boundaries be inspected by the Town Planner prior to clearing.
- Provision of undisturbed natural buffer areas, including buffers up to seventy-five (75) feet in width around the perimeter of a subdivision between cleared areas and abutting properties if determined to be necessary for control of stormwater;
- iii. Provision of natural buffer areas between detention devices and adjacent structures or uses;
- iv. Where appropriate, provision of buffer areas between any point source discharge and surface waters, wetlands, or areas subject to flooding.
- k. Site Clearing Prior to Submission of Plan

In order to preserve natural vegetation which provides areas of high runoff absorption on the site, site preparation, tree cutting, filling, grading and other work done in anticipation of subdivision approval shall not be performed prior to submission and approval of a Definitive Plan. The Board reserves the right to disapprove any such work, and to order restoration of the site, upon filing of a Preliminary Plan or Definitive Plan application.

1. Connection to the Municipal Drainage System

When a drainage system for a subdivision is proposed to connect to the municipal drainage system, the applicant must demonstrate that the municipal system is presently functioning adequately from the point of connection to the point of natural discharge, and that it has the capacity to receive stormwater discharged by the proposed subdivision. An existing municipal drainage system will be considered to function adequately if the applicant documents the following:

- i. The system is in good repair.
- ii. The system can convey peak discharges without surcharging, under postdevelopment conditions, for the 25-year frequency storm (surcharging refers to the condition where flows cannot be contained within the drainage system, including piping and structures, during conveyance of the design storm).
- iii. Connection to the system will not violate any permit conditions applicable to the municipal system under the federal NPDES stormwater program.

The DPW shall inform the Planning Board whether the drainage system is functioning adequately; the expected impact, if any, of the proposed connection; and any way(s) this impact can be mitigated. If an applicant wishes to connect to a municipal drainage which the Planning Board determines, after consulting with the Department of Public Works, is not functioning adequately, the applicant shall be required to make improvements to the municipal drainage system.

3. Maintenance of Drainage, Stormwater Management Systems and Subdivision Amenities by Homeowners

Until a street within a subdivision is accepted by Town Meeting as a public way, all drainage systems within the subdivision it serves shall be operated and maintained by the developer or a Homeowner's Association made up of the residents of the subdivision or their representatives.

4. Storm Drainage Structures and Appurtenances

The drainage collection systems within the subdivision (catchbasins, pipes, open channels and other collection facilities) shall be designed to convey projected peak flow rates based upon the twenty-five (25) year storm utilizing the Rational Method.

a. Catchbasins

Catchbasins shall be located in pairs, one on each side of the roadway, at all low points or sag curves in the roadway, at intervals of not more than three hundred (300) feet on continuous grades of the roadway, and at or near the corners of the roadway at intersecting streets. Each catch basin shall connect directly to a manhole. Additional catchbasins may be required based on the capacity of inlet grates to pass anticipated design flows.

b. Manholes

Manholes shall be located at all changes in direction, either horizontally or vertically, of a drain line or at the intersection of two (2) or more drain lines, or so located that no drain line of a length greater than three hundred (300) feet would exist without either a catchbasin or a manhole.

c. Pipe Conveyance Systems

All storm drain pipes shall be a minimum of twelve (12) inches in diameter. The minimum design velocity shall be three (3) feet per second and the maximum design velocity shall be ten (10) feet per second.

d. Detention/Retention Facilities

Detention/retention facilities include, but are not limited to, detention basins or ponds, retention basins or ponds, swales, infiltration devices, or any device that can change the rate of flow through the use of storage in the device. Detention/retention facilities may not be located on an easement on a proposed building lot but shall be located on separate parcels.

Detention facilities shall be designed with the top of any bank normally being no less than five (5) feet in width to facilitate mowing and/or other maintenance. Greater widths may be required for the embankment's structural integrity. All detention/retention basins shall be provided with a means of access to allow maintenance, repair and emergency response.

- i. Design Calculations for Detention/Retention Facilities and Outlet Structures. All detention devices and associated outlet structures shall be designed based on hydrologic/hydraulic analysis using the following methodology:
 - Runoff hydrographs shall be developed using the NRCS (U. S. Department of Agriculture, Natural Resources Conservation Service) Type III rainfall distribution, NRCS Runoff Curve Number Method of Abstractions or comparable methodology, and NRCS Unit Hydrograph or comparable methodology.
 - 2. Runoff hydrographs shall be routed through the detention structure using the Storage-Indication method or comparable method, and shall include:
 - a. Routing of the full runoff hydrograph through the structure
 - b. Calculations deriving the stage/ storage/discharge rating curve for the outlet structure, accounting for tailwater conditions.
 - c. Hydrologic parameters (Runoff Curve Number, time of concentration), shall be estimated using NRCS TR-55 or a comparable methodology. Examples of models that meet these criteria include: NRCS TR-20, US Army Corps of Engineers HEC-1 or HEC-RMS, US EPA Storm Water Management Model (SWMM).
- ii. Fencing

Detention devices which are expected to contain water or have a steeper than 3:1 interior slope shall normally be fenced for the purpose of safety. However, the Board may waive the requirement for fencing when the applicant can demonstrate that public safety and emergency access have been satisfactorily addressed by an alternative design.

The location and type of fencing for all proposed detention basins shall be shown on the Definitive Plan, with details of the proposed dimensions, materials and design. Location, height, design and materials of fencing shall be subject to the approval of the Board. Provision should be made to allow wildlife to pass under any fencing.

iii. Natural Appearance

Detention and retention basins or ponds should be designed to have a natural appearance. Rounded shapes are preferred for the footprint, and rectilinear shapes should be avoided.

e. Subdrains

In areas where the finished grade of the roadway is less than four (4) feet above the water table or in other areas where, in the opinion of the Board, the subgrade must be drained, a system of subdrains may be required. The subdrain shall consist of a minimum of one longitudinal drain located so as to intercept water draining into the subgrade. In addition, laterals shall be required as directed by the Board in areas in which an undue amount of water could accumulate in the subgrade. The system of subdrains shall be discharged into the storm drainage system through a catchbasin or otherwise disposed of in a manner satisfactory to the Board. Subdrains shall be constructed in accordance with Massachusetts Highway Department standards and specifications.

f. Outfalls

Outfalls shall be located so as to prevent adverse impacts to existing natural resources or abutting properties. All outfalls shall be designed so as to prevent an erosive condition. All outfalls shall extend to a location where they can drain along natural drainage paths or other appropriate locations. Where an outfall discharges to an abutting property or is set back from a natural drainage way or wetland resource area, the applicant shall demonstrate the discharge will be safely conveyed without erosion, sedimentation or other adverse impact.

> Outlet protection shall consist of a properly designed riprap apron, plunge pool or other energy dissipation structure, or level spreader satisfactory to the Board. Stone for riprap and plunge pools shall be sized in accordance with NRCS procedures or a comparable method. Materials for stone shall conform to applicable provisions of Massachusetts Highway Department standards and specifications.

g. Culverts

Where necessary for control of streams or other natural waterways, culverts shall be open-bottom and designed in accordance with Army Corps of Engineers standards for the 100-year design storm and based on the assumption that the entire contributing drainage area is developed to that intensity and in the manner currently allowed by the Zoning By-Law. The calculations necessary to determine the size of any culvert which carries a brook, stream, river, or other natural waterway shall be submitted to the Board for review. All culverts shall have a concrete headwall constructed in accordance Massachusetts Highway Department standards and specifications.

7.4.2. Water Supply

Subdivisions shall be designed to provide adequate water supply to all lots within the subdivision for domestic use.

7.4.3. Emergency Services Facilities

- 1. Emergency access roads to water supplies, large wooded areas, and locations deemed necessary by the Emergency Services Departments shall be provided on the plans. Emergency roads shall be at least 12 feet wide, constructed of an all-weather surface, and cleared of obstructions to a distance of four feet on both sides. Gates, where required, shall be provided with a Fire Department standard lock.
- 2. Fire Protection Distribution Systems shall be provided for all subdivisions. These systems shall consist of water mains, hydrants, and appurtenances designed in accordance with the specifications adopted by the Fire Department.
- 3. A water supply conforming to NFPA 1231 shall be established on the plans for firefighting purposes if deemed reasonable by the Fire Department.

7.4.4. Sanitary Sewage Facilities

Subdivisions shall be designed for the adequate disposal of sanitary sewage from all lots shown on the Definitive Plan.

Where the subdivision will be served by one or more on-site sanitary sewage disposal systems, the Applicant shall provide documentation that the provisions for on-site sewage disposal have been reviewed and approved by the Board of Health and other authorities having jurisdiction. All subdivisions expected to produce greater than 10,000 gpd (gallons per day) of wastewater must be served by a package wastewater treatment plant.

7.4.5. Electrical, Telephone and Other Utilities

- 1. All electrical, telephone, and other utility wires shall be placed underground, unless the Board determines that such placement is not feasible or is not in the best interest of the Town.
- 2. The design and location of the electrical power distribution system shall be as directed and approved by the Electric Company. Streetlights shall be of a type acceptable to the Electric Company and approved by the Planning Board, and shall be installed at locations approved by the Board of Selectmen.
- 3. The applicant shall consult the Gas Company relative to the coordination of the installation of gas pipes, if gas service is to be installed.
- 4. The applicant shall consult the Telephone Company, Television Cable Company, and other applicable utilities relative to the installation of communication services.

7.5 EROSION AND SEDIMENTATION CONTROL

All subdivisions shall be designed to prevent erosion and sedimentation as a result of disturbance of the natural landscape and construction of roads, houses, other structures, landscaping, and other subdivision amenities. Applicants must comply with any additional requirements of the Town of Carver Soil Erosion and Sediment Control By-Law.

Applicants are encouraged to consult the Natural Resources Conservation Service or other technical authorities on erosion control, to select appropriate planting and seeding materials for permanent slope stabilization. Applicants should also consider the use of synthetic Turf Reinforcement Materials (TRMs) and Erosion Control Materials (ECMs), as applicable for the permanent and temporary stabilization of steep slopes.

Any proposed methods of preventing erosion and sedimentation shall meet all requirements of the Conservation Commission under 310 CMR 10.00 and the Town of Carver Wetlands By-law, and shall be consistent with the following design guidelines for erosion and sedimentation, the federal NPDES Stormwater Permit program, the Town of Carver Soil Erosion and Sediment

Control By-law, and the Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas prepared for the Massachusetts Department of Environmental Protection, March, 1997.

- a. At no time during construction shall stormwater flows off site exceed those that existed prior to development, based on a 10-year frequency, 24 hour design storm.
- b. Erosion and sediment control measures shall be designed, in the judgment of the Planning Board, to adequately provide for the following:
- a. Prevention of erosion of exposed slopes by water or wind.
- b. Prevention of sedimentation of natural watercourses.
- c. Prevention of sedimentation of municipal drainage facilities.
- d. Control of dust from construction operations.
- e. Control and treatment of the discharge of water from the dewatering of excavations required by construction activity.
- f. Prevention of tracking of earth materials off-site by construction vehicles.
- c. All embankments created by cuts or fills, and other areas exposed during construction and not otherwise paved or structurally stabilized, shall be stabilized by vegetation during construction and at completion of the subdivision. Where other stabilization measures are not proposed, exposed slopes shall be planted with one or more of the following: shrubs normally growing to a mature height of two feet or less, vines or ground cover plantings, or deep rooted perennial grasses.
- d. In order to reduce opportunities for soil erosion and sedimentation, street layouts shall be designed to minimize disturbance of natural topography by minimizing horizontal and vertical extents of cuts and fills. Streets shall generally be laid out parallel to or at a slight angle to existing contours, to minimize the interruption of the natural topography. No change shall be made to topography that would adversely affect any land abutting a proposed subdivision.
- e. In order to protect natural drainage patterns, the Board reserves the right to limit excessive cuts and fills.
- f. If, in the opinion of the Board, excessive vegetation is removed prior to filing a Definitive Plan or due to proposed grades, a Restoration Plan showing proposed replacement vegetation shall be submitted as part of the Definitive Plan application and shall require approval by the Board.

- g. During construction of the subdivision and the development of each lot within the subdivision, erosion and sediment shall be controlled in accordance with a plan approved by the Planning Board, and consistent with other applicable regulations under authorities having jurisdiction.
- h. The applicant shall provide for the monitoring and maintenance of erosion and sediment control measures throughout the course of construction. The applicant shall provide for a designated representative whom the Town can contact to address any problems relative to erosion and sediment control during the course of construction, and who will have authority to act on behalf of the applicant to correct such problems.
- i. Where unforeseen erosion of a serious nature occurs, the Planning Board or its agent may require additional erosion control measures.

7.6 AMENITIES

7.6.1. Open Space

Before approval of a Plan the Planning Board may require that the Plan show a park or parks suitably located for playground and recreation purposes or for providing light and air. The park or parks shall be at a location designed by the Planning Board and shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of such land and shall contain at least one (1) acre of land. Unless otherwise specified by the Board, the total area reserved for such purposes shall be equal to at least ten (10) percent of the total land area shown on the Plan.

Each area so reserved shall be of suitable area, dimensions, topography and natural character for the purposes of a park and/or playground and shall be so located as to serve adequately all parts of the subdivision. The Board may require that the area or areas reserved be located and laid out so as to be used in conjunction with similar areas within adjoining subdivisions or probable subdivisions. The Planning Board may, by appropriate endorsement on the Plan, require that no building be erected upon such park or parks without its approval for a period of three (3) years, during which period such areas may be acquired by the Town as provided by General Laws, Chapter 41, Section 81Q.

7.6.2. Special Landscape Features

1. Natural Features

Every effort shall be made to preserve significant natural and cultural features within the subdivision. These significant features include trees, wooded areas, water courses, natural rock outcrops, scenic points, historic structures, open meadows of historic significance, other locations or features of historic or archaeological interest, stone walls, and similar community assets which, if preserved, will add attractiveness and value to the subdivision.

2. Stone Walls

Wherever feasible, existing stone walls and shade trees twelve (12) inches in diameter or greater shall be incorporated in the design of the subdivision and shall not be removed. The Board may request that existing stone walls be moved if, in the opinion of the Board, they can be better used in new locations within the subdivision.

7.6.3. Bikeways and Walkways

Public bikeways or pedestrian walkways may be required by the Planning Board to provide circulation or access to schools, playgrounds, parks, shopping, transportation, open spaces and/or community facilities or for such other reason as the Board may determine. These bikeways or walkways may or may not be part of normal sidewalk provision, but they shall not be a part of any lot in the subdivision except where located in a bikeway or walkway easement or an easement provided for the potential projection of a street or way. Such bikeways or walkways shall be designed in accordance with the following:

- 1. Minimum right-of-way width: fifteen (15) feet.
- 2. Maximum pavement width: eight (8) feet.
- 3. Maximum gradient: three (3) percent except that gradients of up to five (5) percent may be permitted over segments less than one hundred (100) feet in length.
- 4. Minimum centerline radius: twenty-five (25) feet.

7.6.4. Retaining Walls

The location, general configuration, and length of retaining walls shall be subject to approval by the Planning Board. A building permit shall be required for any retaining wall which retains more than four (4) feet of fill. Before construction of retaining walls which exceed 10 feet from the base to the top of the wall, certification by a structural engineer shall be submitted to the Building Commissioner.

Retaining walls may be permitted when grading is not feasible where it is necessary to accommodate changes in elevation. Retaining walls shall have a maximum height of four (4) feet above ground level and shall be no closer than ten (10) feet to any lot line except when necessary to stabilize a street or driveway. The Board may require that retaining walls be screened with plantings and/or treated with a stone-textured veneer. As-built plans for retaining walls shall be provided to the Board and Building Commissioner upon completion of the wall.

7.6.5. Street Trees

- 1. The Applicant shall document that the removal of existing street trees in conjunction with the proposed subdivision has been reviewed and approved by the Tree Warden.
- 2. The Applicant shall provide street trees along all new subdivision roadways, as specified in Section 8.3.10 of these Rules and Regulations.

7.6.6. Fencing

If fencing is proposed in conjunction with a proposed subdivision, its location and design shall be subject to approval by the Planning Board. The Applicant shall provide information on the location, height, design, and materials of all proposed fencing.

7.7 EASEMENTS

- 1. Easements for municipal services shall be provided as necessary and shall be at least twenty (20) feet in width. Where practical, such easements shall be located adjacent to, but to one side of, a lot line.
- 2. Where a subdivision is traversed by a water course, drainage way, channel or stream, the Planning Board shall require a storm water easement or drainage right-of-way of adequate width and proper side slope to conform substantially to the lines of such water course, drainage way, channel or stream and to provide for construction or other necessary purposes.
- 3. Access easements to park and conservation land shall be provided, if required by the Planning Board, and shall be at least twenty (20) feet in width.

SECTION 8.0 CONSTRUCTION AND INSTALLATION SPECIFICATIONS

8.1 GENERAL

- 1. The applicant shall provide and install all necessary materials, labor, appurtenances and equipment to complete the municipal services as may be required by the Definitive Plan in a manner acceptable to the officials or agency having jurisdiction over the respective service. All costs incurred by the applicant as a consequence of installing and maintaining such municipal services as required shall be paid by the applicant, including all costs which may be incurred for any reasons whatsoever until such time as the Town assumes responsibility for such service or services. The Board will not take any action to have the applicant reimbursed for any costs so incurred.
- 2. All improvements specified or implied on the Definitive Plan shall be constructed or installed by the applicant in accordance with the provisions of these Rules and Regulations, unless directed otherwise by the Board. Items not specifically mentioned herein shall be constructed in accordance with the latest revision of the Standard specifications for Highways and Bridges of the Massachusetts Highway Department (hereinafter referred to as the MassHighway Standards), unless specifically directed otherwise by the Board.
- 3. Prior to the start of any construction, the subdivision, including all way and lot lines and municipal services shall be laid out as to line and grade by a Registered Land Surveyor and a certificate to this effect filed with the Board. Stakes for line and grade, clearly marked with the proper station, shall be placed and shall be maintained throughout construction. Any work which, in the opinion of the Board or its designated agent, has not been properly laid out or does not conform to the approved Plan may be checked by a Registered Professional Engineer employed by the Board or by the Director of Public Works or his designee. The applicant shall pay all costs which the Board incurs as a consequence of checking the work. The Board shall require the removal and correction or replacement of any work which has been incorrectly laid out.
- 4. The entire area to be occupied by the roadway plus an additional four (4) feet on either side, or extending outward to the toe of slopes to be excavated, or, in cut sections, to the further side of any sidewalk to be constructed, whichever is greater, shall be excavated to a minimum of four (4) feet below finished grade in cut sections or to such greater depth as may be required by the Director of Public Works if soft or yielding material, clay, peat, silt, sand pockets, bouncers or rocks, organic materials, or other material detrimental to the subgrade is encountered.

- All fill, gravel, and undisturbed material shall be non-frost susceptible and shall contain not more than ten (10) percent passing the #200 mesh sieve for a minimum depth of four (4) feet below the finished roadway grade. Trees intended to be preserved shall be protected from injury by suitable boxes, or fenders, or, if in fill, by wells constructed in accordance with MassHighway standards of a diameter at least three (3) feet or three (3) times the tree diameter, whichever is greater. All work in connection with the installation of utilities and drainage within the roadway must be completed prior to placement of fifteen (15) inch of gravel sub-base.
- 5. All work in connection with the municipal services shall be left uncovered until such time as the Director of Public Works permits the backfill to be placed. The applicant shall notify all utility companies with municipal services installed or to be installed within the ways as to the date and time when he intends to place the gravel foundation and paving so that such utility company may properly install the utilities and record the location of pertinent features of the system so that they will not be covered or lost as a result of the paving operation.
- 6. All storm drains, sanitary sewage and water facilities, and gas pipes, if any shall be installed to the street line prior to excavation of the trench for underground electric and telecommunication conduits and prior to installation of the gravel foundation.
- 7. Underground electric and telecommunication conduits and service connections or any and all utilities from the main structures in the street to the exterior lines thereof for each lot shown on the plan, whether or not there is a building thereon, shall be installed prior to installation of the gravel foundation. Any deviation from this requirement necessitated by unusual topographic or technical difficulties must have the specific written approval of both the Planning Board and the Director of Public Works. No bituminous concrete may be placed on frozen sub-base in the case of the binder course, or if ambient daytime temperature falls below 50 degrees F in the case of the finish/wearing surface.
- 8. The applicant shall protect all utilities and appurtenances installed under these Rules and Regulations from any and all damage until released from such responsibility. Any damage to these utilities and appurtenances prior to such release shall be repaired by the applicant in a manner satisfactory to the Planning Board and the Director of Public Works, the full cost of which repairs shall be borne by the applicant.

8.2 UTILITIES

8.2.1. Storm Drainage

- 1. Storm drains, culverts, catch basins and manholes shall be installed as shown on the approved Plan. The construction of the drainage system, including methods of construction and quality of materials shall conform to the applicable sections of the MassHighway Standards or as directed by the Director of Public Works.
- 2. All storm drains shall be reinforced concrete pipe and shall be laid with a minimum of two and one-half (2-1/2) feet of cover over top of pipe. Cover required hereunder may be reduced to provide the appropriate taper at the outfall of a drain line. Storm drains for subdivisions with Minor Streets may use smooth interior corrugated high density polyethylene (HDPE) pipe manufactured in accordance with requirements of ASTM F 2306, latest editions, from virgin PE compounds which conform with the requirements of cell class 335400C as defined and described in ASTM D 3350, latest editions. HDPE pipe may not be used for outfalls.
- 3. All pipe joints shall be sealed using rubber gaskets.
- 4. All pipe connections to manholes, catch basins, and similar drainage structures shall be made using flexible connections of a type approved by the Department of Public Works.
- 5. All trench backfill material for the storm and subsurface drains and other backfill within the limits of the way shall conform to the sub-base course requirements and shall be deposited to required subgrade in not more than eight (8) inch layers and compacted to ninety-five (95) percent of the maximum dry density as determined by the modified Proctor Test, in accordance with ASTM D 1557 66T, Method "D". HDPE pipe shall be installed in accordance with ASTM D 2321
- 6. Catch basins shall be constructed of reinforced pre-cast concrete. A standard square frame and bicycle-safe grate shall be furnished and set. All catch basins shall have an inside diameter of at least four (4) feet; shall have a sump at least four feet deep below the invert of the outlet pipe; shall be furnished with a outlet trap (with anti-siphon) of a type approved by the Director of Public Works.
- 7. All manholes shall be constructed of the same materials as permitted herein for catch basins except that a standard twenty-six (26) inch diameter cover marked with the word "DRAIN," and frame shall be furnished and set.

- 8. The subdrainage system as shown on the Definitive Plan or as ordered by the Board during construction shall be constructed of not less than eight (8) inch diameter, perforated, high-density polyethylene (HDPE) pipe, laid to line and grade. Pipe joints shall be constructed using fittings of the same manufacture as the pipe. Underdrain pipe shall be installed in an envelope of drainage stone extending 8 inches below invert and 8 to 12 inches above top of pipe. The stone shall be wrapped in geotextile filter fabric meeting MassHighway standards.
- 9. Drains, catch basins, and manholes shall not be backfilled until inspected and approved by the Director of Public Works. Covers shall be set to pavement Binder Course and adjusted to final grade for the construction of the pavement Top Course.
- 10. All drainage pipes shall end in a concrete or masonry headwall having dimensions and constructed in accordance with the MassHighway Standards. The concrete shall have a minimum compressive strength of three thousand (3,000) pounds per square inch after twenty-eight (28) days curing. Dump stone shall be placed at the outfall in conformance with MassHighway Standards 258.

8.2.2. Fire Protection Facilities

The installation of water systems, with their appurtenances, including the methods of construction and quality of materials used, shall be in accordance with the specifications adopted by the Fire Department.

8.3 STREETS

8.3.1. General

All streets, including sidewalks and grass plots, within the subdivision shall be constructed in conformance with the Typical Roadway Cross Section shown in Appendix B, shall be illustrated on the approved Plan, and shall not deviate from the approved Plan without written permission from the Planning Board. Whenever it is necessary to disturb an accepted street or a completed street not under covenant or security to effect utility connectors or for any other purpose, said street shall be repaired in accordance with the conditions of a street opening permit obtained from the Department of Public Works.

8.3.2. Subbase

All fill material which may be required within the exterior lines of the way up to the gravel foundation shall be of clean gravel or other suitable material which shall contain not more than ten (10) percent passing the #200 mesh sieve as approved by the Director of Public Works. Such

material shall be deposited in layers of not more than six (6) inches for the full width so as to form a roadway foundation which shall at all points be parallel to the finished grade of the roadway surface. The gravel and fill shall be compacted to ninety-five (95) percent of the maximum dry density as determined by the modified Proctor Test, in accordance with ASTMD - 155 - 66T, Method "D". The gravel used for the roadway base shall conform to the gradation specified by the Department of Public Works. The Director of Public Works or his designee will inspect the roadway foundation after the compaction of each six (6) inch layer, and, after the approval of the completed foundation, the entire roadway shall be surfaced as required herein.

8.3.3. Roadway Surface

- a. The Bituminous Concrete Pavement shall be laid in two courses with a finished pavement depth after compaction as shown on the Typical Cross Section.
- b. The methods of construction and the quality of materials used shall conform to the Specifications for Class I Bituminous Concrete pavement Type I-1 of the Massachusetts Highway Department.
- c. All bituminous concrete to be placed in the traveled way, driveway aprons and sidewalks must be inspected at the supplier's batching plant by a Certified Plant Inspector (as certified by Mass. Highway Department,) at the expense of the developer.
- d. No roadway surface shall be placed until all underground utilities, including house connections, have been installed.

8.3.4. Sidewalks

- a. Sidewalks shall have a finished grade in relation to the roadway as shown on the Typical Cross Section and shall be constructed of either Bituminous or Portland Cement Concrete for Minor and Secondary Streets and shall be constructed of Portland Cement Concrete for Major Streets. At all intersections the sidewalks shall be constructed across the grass plot to the edge of the traveled way.
- b. Sidewalks shall be constructed on a gravel foundation which shall be a minimum of nine (9) inches in thickness and shall otherwise conform to the requirements for the roadway foundation. In no case shall the surface be laid until the foundation shall have been inspected and approved by the Director of Public Works or his designee.
- c. Bituminous Concrete sidewalks shall consist of two (2) inches of Type I-1 Binder Course and one (1) inch of Type I-1 Top Course after completion.
- d. Portland Cement sidewalks shall be constructed to a depth of four (4) inches and reinforced with wire mesh. The sidewalks shall have a scored joint every four and one-half (4 1/2) feet. After each four (4) scored sections, there shall be an expansion joint consisting of a preformed joint filler, caulked at the surface with a bead of Thoikol or approved sealer. All concrete shall be mixed, placed, and cured in accordance with ACI Manuals. No concrete sidewalks shall be constructed later than September 30 in any year.

8.3.5. Aprons

Driveways shall be constructed in the same manner as the traveled way. The slope shall be two (2) inches in a distance of five (5) feet from the property line toward the gutter. In no case shall the surface be laid until the sub-base shall have been inspected and approved by the Director of Public Works.

8.3.6. Bikeways/Walkways

Bikeways and walkways shall be constructed in the same manner as sidewalks unless otherwise specified by the Board.

8.3.7. Curbing and Berms

a. Sloped Granite Curbing

Curbstone shall be of hard and durable granite, of a light color satisfactory to the Director of Public Works, free of seams which impair its structural integrity, and of a good, smooth splitting appearance. Granite shall come from approved quarries and, when tested, shall have a French coefficient of wear of not less than sixteen (16), or a Los Angeles percentage of wear of not more than thirty-two (32). Test samples shall be hand broken.

i. Dimensions

The stones for the several types of curb and curb inlets shall be cut to the dimensions below:

Type: SA Thickness: 5-8 inches Depth: 12 inches Minimum Length: 3-6 feet Minimum Width at Bottom: 4 inches (for 2/3 length)

ii. Finish

Finish and surface dimensions for the several types of curb shall conform to the following requirements:

- 1. The exposed face shall be smooth quarry split to an approximately true plane having no projections or depressions which will cause over one (1) inch to show between a two (2)-foot straightedge and the face.
- 2. The top and bottom lines shall be pitched off to a straight line and shall not show over one-half (1/2)-inch between stone and straight-edge.
- 3. The ends of all stones shall be square with the planes of the top and bottom face, and so finished that when stones are placed end to end as closely as possible, no space more than three-quarter (3/4)-inch shall show in the joint for the full width of the top or down on the face for eight (8) inches. The remainder of ends may break back not over eight (8) inches from the plane of the joint.

- 4. Exposed arris lines shall be pitched straight and true with no variation from a straight line greater than one-quarter (1/4) inch.
- iii. Mortar

Mortar for pointing joints shall be composed of equal parts of air entrained cement and sand with sufficient water to form a workable mixture. The materials shall conform to the requirements of ASTM C-91 and C-144.

iv. Setting Curbstones

Curb shall be set in cement concrete to bituminous binder grade and at line and grade required, and it shall project four (4) inches above the finish grade of roadway, unless otherwise directed or called for on the Plan.

b. Cape Cod Berms

Cape Cod Berms, twelve (12) inches in width, shall be installed as shown on the Typical Cross Section, where applicable. Such berms shall be constructed monolithically with the bituminous Top Courses. A temporary bituminous berm shall be constructed with the Binder Course and maintained in serviceable condition to ensure stormwater runoff is directed to the storm drain system. Temporary berms shall be removed or incorporated into the Top Course as directed by the Department of Public Works.

8.3.8. Grass Plots

- a. A grass plot shall be provided on each side of all roadways according to the Typical Roadway Cross Section. The finished grade of the grass plot in relation to the finished grade of the roadway shall be as shown on the Typical Cross Section.
- b. The top six (6) inches of grass plots and side slopes (cut and fill) shall be good quality loam as approved by the Director of Public Works and shall be screened, raked, and rolled with a hand roller to finished grade. The loam shall be seeded with lawn grass seed applied in sufficient amounts. Following the completion of roadway and sidewalk construction, the applicant shall perform sufficient cuttings and otherwise maintain the grass plot until released from such responsibility as provided above.

8.3.9. Side Slopes

The area outside the traveled way (cut or fill) shall be sloped at a rate not steeper than three (3) vertically to one (1) horizontally until it intersects the finished grade of the abutting lots. All such slopes shall be loamed and seeded as required above with regard to grass plots. Where the final grade of the exterior street line is such that the maximum slope cannot be maintained, a retaining wall of stone, brick, reinforced concrete or other suitable material satisfactory to the Planning Board shall be constructed outside the street lines in order to support the street and/or adjacent land. The construction of retaining walls shall be in a manner approved by the Director of Public Works or Building Commissioner, as applicable.

8.3.10. Street Trees

- a. Locations and Type of Trees. Trees shall be located at a minimum average spacing on each side of the street of fifty (50) feet and within twenty (20) feet of the street line, and shall be located a minimum of twenty (20) feet from proposed driveways unless otherwise directed by the Planning Board. Street trees shall be a minimum of 12 feet in height and 2 ¹/₂" caliper (dbh) and shall be nursery stock, conforming to the standards of the American Association of Nurserymen, of a species and cultivated variety approved by the Board. At the discretion of the Planning Board, existing trees may be used as street trees.
- b. Planting. Street trees shall be planted in a minimum of ½ cubic yard of topsoil and mulched a maximum of 2 ½" inches deep. Mulching shall be in a circle with the radius beginning three inches from the trunk and extending to the drip line. Trees shall be properly wrapped and guyed to insure survival. The developer will be responsible for the health of all trees planted until such time as the road or roads are accepted as public ways. Prior to town acceptance of the street, the developer shall replace any tree which dies.

8.3.11. Street Signs

The applicant shall furnish and erect, as instructed by the Director of Public Works, at all intersections within the subdivision, street signs to conform with the design of those used by the Town as specified by the Department of Public Works. Such signs shall bear the names of the intersecting streets as shown on the Definitive Plan.

8.3.12. Monuments

Granite or reinforced concrete bounds shall be set at all street intersections, at all points of change in direction or curvature of streets and the subdivision perimeter, and at other points where, in the opinion of the Board, permanent monuments are necessary. Monuments shall be at least five (5) by five (5) inches and shall extend a minimum of three and one-half (3-1/2) feet

below finished grade to not more than two (2) inches above the finished grade. Bounds shall have a 3/8" drill hole or a marked metal disk at the center.

The bounds shall not be set until all construction which could disturb the monument is completed. Certification, in writing and sealed, shall be made by a Registered Land Surveyor, to the Director of Public Works and the Planning Board, to the effect that, as determined by survey after the completion of construction, the bounds have been properly set in accordance with the approved Definitive Plan and these Rules and Regulations.

8.3.13. Cleaning Up

The entire area of the subdivision shall be cleaned up so as to leave, in the opinion of the Board, a neat and orderly appearance free from debris end other objectionable material. Following the completion of all construction activities, all catch basins, manholes and conduits shall be cleaned. Following the completion of this and other items of work as required herein, a final inspection will be made by the Planning Board or its agent.

8.3.14. Maintenance

If released from restrictions with regard to the sale of lots or buildings on lots by the posting of performance bond, the applicant or his successors in title shall maintain the roadway for vehicular traffic in a manner satisfactory to the Board. Further, the applicant shall maintain the roadway in a subdivision in a condition which meets all the above requirements to the satisfaction of the Board until released from such responsibility. The Planning Board may require a fee to guarantee maintenance of private subdivision roads until such time as the Homeowner's Association begins maintenance or the road is accepted as public by Town Meeting.

SECTION 9.0 ADMINISTRATION

9.1 WORK NOTIFICATION TO TOWN DEPARTMENTS

9.1.1 Notification of Start of Construction

The Planning Board, Department of Public Works, and Conservation Commission (as applicable) shall be notified of the construction start date at least two weeks prior to the commencement of construction. The Town may at that time retain the services of a consulting engineer to inspect the construction work. Required inspections shall be those outlined in Section 9.2, and any others deemed necessary by the Planning Board, Department of Public Works or Conservation Commission. If a consulting engineer is retained by the town, the developer shall deposit with the Town sufficient funds to cover the cost of the inspections prior to the commencement of work. The inspection services will be administered through the Department of Public Works.

9.1.2 Preconstruction Conference

Prior to the initiation of any work within the subdivision, the Director of Public Works shall hold a preconstruction conference to be attended by the applicant, his engineer of record, a representative of the Department of Public Works, the Town Planner, the town's consulting engineer(s), and by such other persons as the Director of Public Works or Planning Board shall require.

The applicant shall designate its representative who will be responsible for on-site monitoring of erosion and sediment controls during construction. The applicant shall provide the Director of Public Works the representative's contact information and phone number with 24-hour availability, in the event of erosion/sedimentation problems or emergencies.

9.1.3 Notification

The Department of Public Works and/or its designee, as the authorized agent for the Planning Board, shall be notified, at least forty-eight (48) hours prior to the commencement of each step of the work as listed below. No work shall commence until after notification is given and acknowledged.

- 1. Staking of roadway limits prior to clearing and grubbing.
- 2. Placement of erosion control measures.
- 3. Clearing of trees for roadway construction.
- 4. Grubbing of roadway.
- 5. Placement and compaction of roadway subbase.
- 6. Installation of storm drainage facilities, if applicable.

- 7. Installation of water and sanitary sewage facilities.
- 8. Testing of piped utilities and appurtenant structures.
- 9. Installation of electric, telephone, and other underground conduit systems.
- 10. Installation of gas mains, if applicable.
- 11. Placement and compaction of material for roadway gravel.
- 12. Placement of bituminous concrete binder courses.
- 13. Placement of bituminous concrete top course.
- 14. Installation of curbing.
- 15. Placement of gravel in sidewalks.
- 16. Placement of bituminous concrete or concrete for sidewalks and aprons.
- 17. Placement of loam for grass plots.
- 18. Grading of slopes.
- 19. Construction of retaining walls.
- 20. Setting of monuments.
- 21. Notification that all road construction, landscaping and drainage work is complete and in conformance with the Definitive Plan.

9.1.4 Allocation of Risk

If any of the above designated work is commenced without proper notification being given as specified, such work shall be performed at the risk of the applicant or owner. The Director of Public Works may order the removal such work at the expense of the applicant or owner.

9.2 INSPECTION

Prior to the start of construction in a subdivision, the Planning Board will designate either the Director of Public Works or his designee or another authorized Engineer selected by the Planning Board to be responsible for periodic inspection of construction of the required improvements. The inspector will utilize the standard inspection form and will sign the form after the satisfactory completion of each work item described thereon. All inspections shall be at the expense of the applicant. Subdivision surety will not be released until all such expenses have been paid to the Board. The Town Planner shall be notified of the time and date of each of the following inspections. These inspections may be in addition to any other inspections the Board may make or cause to be made.

- 1. First Inspection: An inspection will be made of the work upon completion of all clearing, grubbing and excavation and all work incidental thereto. No fill shall have been placed at the time of this inspection.
- 2. Second Inspection: An inspection will be made of the completed drainage system (without backfill) as required on the Definitive Plan. At the same time, or such other

> time as the work may be available, an inspection will be made of the completed municipal services (without backfill) as required on the Definitive Plan. The inspection of the required municipal services will be made by the agency responsible for the particular service. Backfill of any portion of the drainage system or municipal services shall not be made until after receipt of notification of approval or acceptance by the Director of Public Works or his designee.

> The inspection shall include the backfilling and compaction of all utility trenches as may be installed by utility companies. Such work shall be performed in the manner as required by these Rules and Regulations. It shall be the applicant's responsibility to ensure compliance with these requirements. If, in the opinion of the Planning Board, the backfilling and compaction of utility trenches and the patching of the pavement, if required, has not been performed in accordance with these Rules and Regulations, the Planning Board may not release the bond or Covenant applicable until such work has been performed to the satisfaction of the Planning Board.

- 3. Third Inspection: An inspection will be made of the compacted fill to bring the roadways to their subgrades. No roadway foundation shall be installed until the compacted fill has been inspected and approved by the Director of Public Works or his designee.
- 4. Fourth Inspection: An inspection will be made of the first layer of compacted roadway foundation with sieve analysis. A gravel sample or samples may be taken at the discretion of the Director of Public Works or his designee. An inspection will be made of the final layer of compacted roadway foundation. No pavement shall be installed until the compacted roadway foundation with results of compaction tests have been inspected and approved by the Director of Public Works or his designee.
- 5. Fifth Inspection: An inspection will be made of the Binder Courses and again when the Finish Course for roadway surface is put in place. All bituminous concrete must be inspected at the supplier's batching plant by a Certified (by Mass. Highway Dept.) Plant Inspector at the expense of the developer.
- 6. Sixth Inspection: An inspection will be made of all work as required on sidewalks, curbing, trees including street trees, landscaping, lighting, grass plots, side slopes, monuments, bounds and street signs.
- 7. Seventh Inspection: A final inspection will be made of all subsequent work as required herein or on the Definitive Plan to include the final clean-up. The results of all inspections will be recorded by the Director of Public Works or his designee, or in the case of those inspections which are the responsibility of other agencies by the

> responsible agent of such agency, on an Inspection Form which shall be kept on file in the office of the Director of Public Works until completion of the subdivision.

9.3 WATER LINE TESTING

Prior to acceptance by the Town, all water lines shall be tested to the satisfaction of the Fire Department. The results of each testing shall be conveyed, in writing, to the Planning Board and the Fire Department.

9.4 COMPLETION OF AS-BUILT PLANS

At the completion of construction, As-Built Plans, with a certification that all construction conforms to the As-Builts, must be submitted to the Planning Board and Department of Public Works. As-Built Plans must include all items described in Section 6.11.5 of these Regulations, and must be approved by the Department of Public Works prior to the return of subdivision surety.

9.5 DELAYS IN CONSTRUCTION

When any delay in completion of the construction of streets is anticipated in portions of a subdivision where houses are completed and occupied, the applicant may be required to construct certain portions of roads including, at a minimum, grading the sub-base, installing catch basin frames and manhole covers to a temporary grade, and placing the bituminous concrete binder course to provide a temporary passable surface to the affected lots. All construction must conform to time limits set by the Planning Board in their Conditions of Approval of the Definitive Plan. If delays are anticipated that would extend the time of construction beyond approved limits, prior approval of the Board must be obtained.

APPENDIX A. APPLICATION AND REVIEW FEES

SECTION 1. PURPOSE

These regulations and fee schedules have been adopted to produce a more equitable schedule of fees which more accurately reflects the costs of technical and legal review of applications to the Planning Board; to take advantage of the procedures offered by G.L. c. 44, s. 53G; to establish a review procedure in the selection of consultants; and to promote more informed decisions by the Planning Board.

SECTION 2. FEE STRUCTURES AND REGULATIONS

2.1 General

The Planning Board shall impose reasonable fees for the review of applications which come before it. The Planning Board may impose Administrative Fees and Project Review Fees as may be applicable to the types of applications set forth below.

2.2 Form of Payment

All Administrative and Project Review Fees shall be paid by bank or certified check.

SECTION 3. ADMINISTRATIVE FEES

3.1 Applicability

An Administrative Fee shall be assessed to offset the expense of review by the Planning Board and its office with regard to all applications set forth in Section 3.3, below.

3.2 Submittal

Administrative Fees shall be submitted at the time of the submittal of the application. Any application filed without this fee shall be deemed incomplete and no review work shall commence until the fee has been paid in full. All fees shall normally be collected and assessed by the Planning Board or its agent.

3.3 Schedule of Administrative Fees

The schedule of Administrative Fees established by the Planning Board that applies to applications to the Planning Board is provided in "Planning Board Fee Schedule," dated February 2008. This schedule supersedes all previous schedules as they may have appeared in the Zoning

By-Laws, the Rules and Regulations for the Subdivision of Land, and any listings which may have been compiled from time to time for the benefit of applicants.

3.4 Fees for Revised Applications

Where an Administrative Fee has been calculated by the number of lots or units proposed, and the application is revised after payment of said fee, if the number of proposed lots or units increases, the applicant shall pay a fee equivalent to the difference between the fee originally paid and the fee that would have been paid had the original submission included these additional lots or units. No review of these additional lots or units shall take place until this additional fee is paid to the Planning Board office, and failure to make this payment after requesting additional lots shall be grounds for denial of the application.

3.5 Fee Waivers

The Planning Board may waive or reduce any Administrative Fee, if, in the opinion of the Board, unusual circumstances exist regarding the subject property or the applicant.

3.6 Refund

Once the review process has been commenced, the Planning Board shall not refund Administrative Fees, including the case of withdrawal of the application by the applicant.

SECTION 4. PROJECT REVIEW FEES

4.1 Applicability

In addition to an Administrative Fee, the Planning Board shall impose a Project Review Fee on those applications which require, in the judgment of the Planning Board, review by outside consultants due to the size, scale or complexity of a proposed project, the project's potential impacts, or because the Town lacks the necessary expertise to perform the review work related to the permit or approval. In hiring outside consultants, the Board may engage engineers, planners, lawyers, designers, or other appropriate professionals able to assist the Board and to ensure compliance with all relevant laws, ordinances, by-laws and regulations. Such assistance may include, but shall not be limited to, analyzing an application, monitoring or inspecting a project or site for compliance with the Board's decisions or regulations, or inspecting a project during construction or implementation.

4.2 Submittal

Project Review Fees and Supplemental Project Review Fees shall be deposited in an account established pursuant to G.L. c. 44, s. 53G (53G Account).

4.3 Determination of Project Review Fees

Upon receipt of an application for Planning Board approval, Planning Board staff shall submit plans and/or other pertinent information to the consultant chosen by the Planning Board in order to obtain an estimate of the cost of consulting or review services. On receiving notification of the estimate, the applicant shall submit the amount indicated to the Planning Board. No review work shall commence until the estimated fee has been paid in full. Failure to submit the fee within five business days following notification shall be reason for denial of the plan for failure to comply with these regulations.

4.4 Inspection Phase

After the granting of a Special Permit, site plan approval or Definitive Plan approval, the Planning Board may require a Supplemental Project Review Fee for the purpose of ensuring the availability of funds during the inspection phase of the review process.

4.5 Handling of Project Review Fees

The Project Review Fee is to be deposited into a special account as set forth in G.L. c. 44, s. 53G.

- a. Outside consultants retained by the Planning Board to assist in the review of an application shall be paid from this account.
- b. Project Review Fees shall be turned over to the Town Treasurer by the Planning Board for deposit into a 53G Account.
- c. A copy of the latest statement from the banking institution handling the 53G Account shall be forwarded from the office of the Town Treasurer to the Planning Board office as soon as it is received for timely and accurate accounting.
- d. The Town Accountant shall prepare a report on activity in the 53G Account on an annual basis.
 - 1. This report shall be submitted to the Selectmen for their review.
 - 2. This report shall be printed in the Annual Report for the Town.
- e. An accounting of an applicant's funds held in the 53G Account may be requested by the applicant at any time.
 - 1. The Planning Board shall respond to the request in a timely fashion.
 - 2. This accounting shall include the following information:
 - i. The latest statement from the banking institution handling the account, which should include an accurate accumulated interest portion to the closing date of the statement if such statements are subdivided into individual applicants' accounts. Otherwise, a statement of principal and interest, prepared by the Planning Board office, based on the latest statement from the banking institution.
 - ii. A report of all checks authorized for issuance since the last banking statement.
- f. An applicant may request an estimate of bills pending from consultants for work completed, or in progress, but not yet invoiced.
- g. Excess fees in the 53G Account, including accumulated interest, shall be returned to the applicant or other person or agency responsible for making the original deposit at the conclusion of the review process, as defined below.
 - 1. With the approval or disapproval of a Preliminary Subdivision Plan.
 - 2. With the disapproval of a Definitive Subdivision Plan.
 - 3. With the release of the performance bond at the end of construction of an approved Definitive Subdivision Plan.
 - 4. With the final inspection or the approval or disapproval on all other types of applications under the Zoning By-Law, whichever comes later.

4.6 Appeal

The Planning Board's selection of a consultant for the review of an application may be appealed in writing to the Board of Selectmen by the applicant, providing such appeal is initiated within two weeks of the initial selection.

- a. The Selectmen shall convene a formal hearing within twenty days of receiving a written appeal by an applicant.
- b. Two circumstances may disqualify the selected consultant. These conditions constitute the only grounds for an appeal.
 - 1. Conflict of interest: A consultant shall not have a financial interest in the project under review, or be in a position to financially benefit in some way from the outcome of the pending review process. Consultants must be in compliance with the Massachusetts Conflict of Interest Law, G.L. c. 268A.
 - 2. Lack of appropriate qualifications: A consultant shall possess the minimum required qualifications. The minimum qualifications shall consist of either an educational degree in, or related to, the field at issue or three or more years of practice in the field at issue or a related field.
- c. The required time limits for action upon an application by the Planning Board shall be extended by duration of the appeal.
- d. If no decision is rendered by the Board of Selectmen within 30 days following the filing of the appeal, the selection made by the Planning Board shall stand.
- e. This appeal shall not preclude further judicial review, if otherwise permitted by law, on the grounds provided for in this section.

SECTION 5. REVISION OF FEE SCHEDULES AND REGULATIONS GOVERNING FEES

5.1 Amendment

The Planning Board may review and revise its regulations and fee schedules, from time to time, as it sees fit.

- a. Amendments shall be preceded by a Public Hearing.
- b. Any new regulations or alterations to the fee schedule shall take affect upon filing a copy of the amendments with the Town Clerk.

APPENDIX B. CHARTS, DIAGRAMS AND TABLES

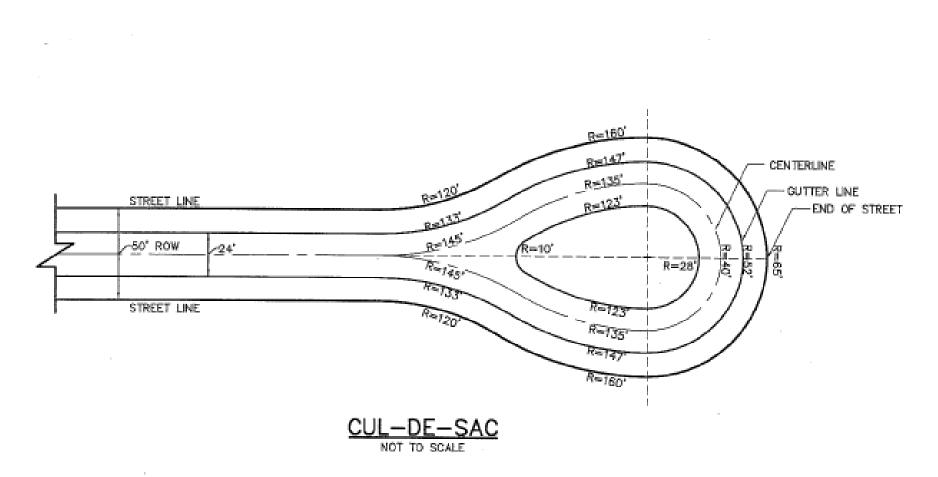
TABLE 1

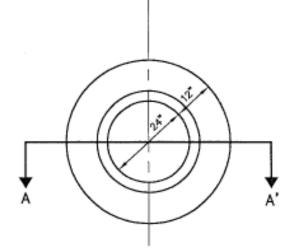
Table of Street Dimensions¹

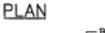
Type of Road	R.O.W. Width (ft.) (A)*	Pavement Width (ft.) (B)	Lane Width (ft.) (C)	Shoulder Width (ft.) (D)	Top Course Pavement Thickness (in.) (E)	Binder Pavement Thickness (in.) (F)	Gravel Base Thickness (in.) (G)	Sidewalk Width (ft.) (H)
Major	60	30	12	3	1.5	2.5	15	5
Secondary	50	24	12	0	1.5	2.0	12	5
Minor	50^{2}	24	12	0	1.5	1.5	12	4

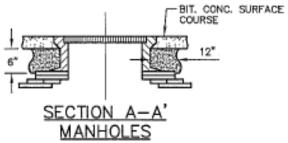
 ¹ Refer to *Street Cross-Section* detail for graphical representation of dimensions.
 ² Conservation Subdivision Plans and Yield Plans shall use a right-of-way width of 40 feet.

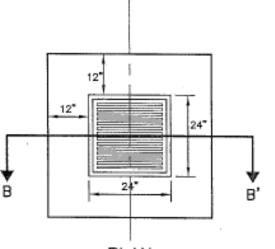
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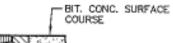






MANHOLES

. . . .

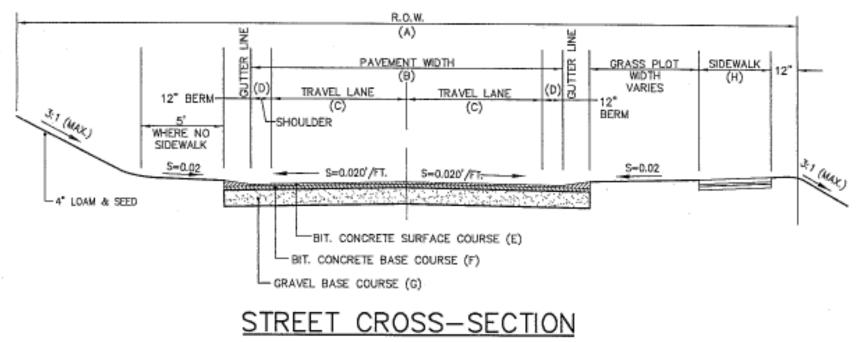




NOTE:

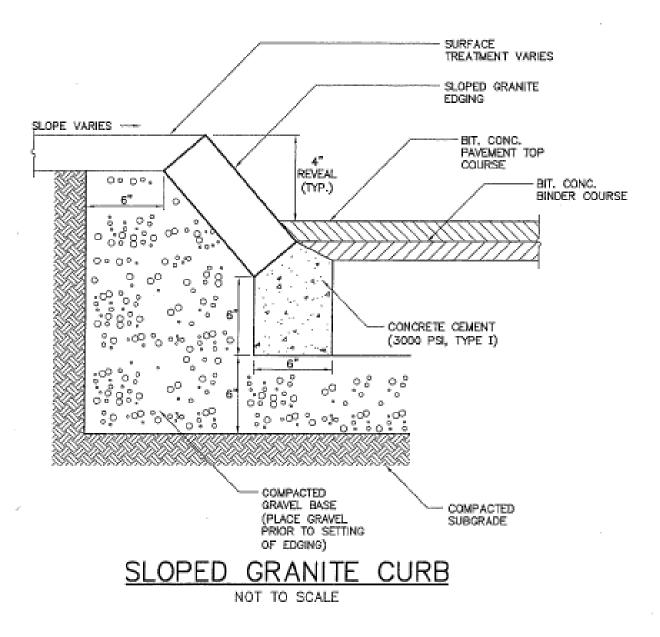
COLLARS TO BE CLASS "A" CEMENT CONCRETE MASONRY REGULAR OR H.E.S. AS DIRECTED.



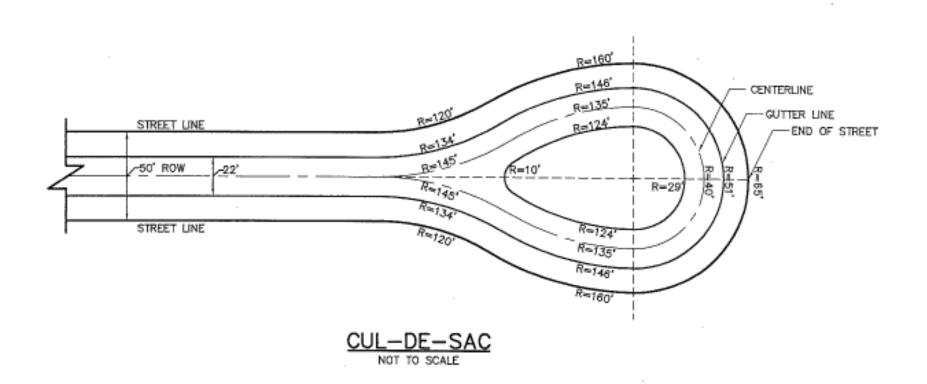


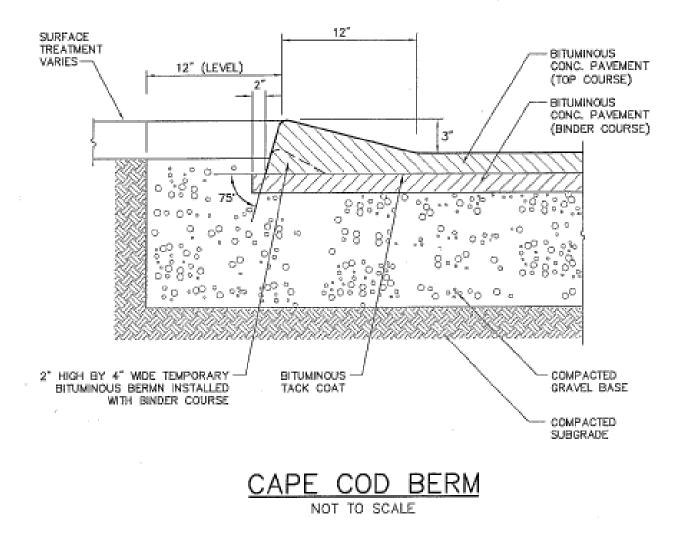
REFER TO TABLE 1 IN APPENDIX B FOR TABLE OF DIMENSIONS

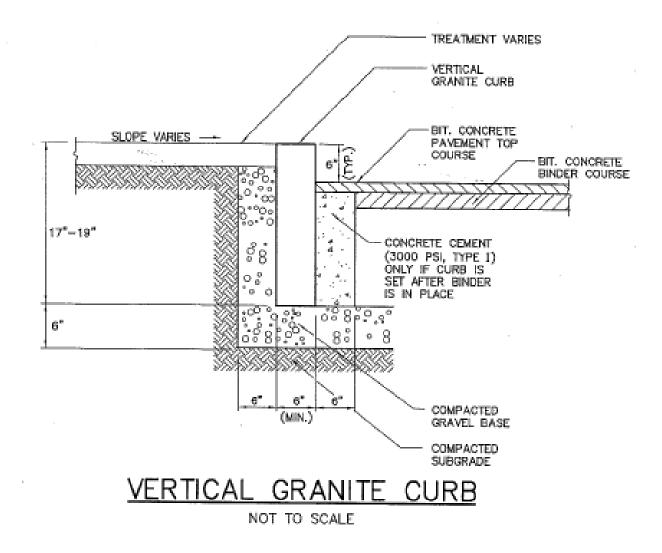
NOT TO SCALE



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