

SUBDIVISION REGULATIONS

TOWN OF FREEDOM

ADOPTED JANUARY 16, 1969

AMENDMENTS:

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JANUARY 20, 1983
FEBRUARY 19, 1987
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**TOWN OF FREEDOM
SUBDIVISION REGULATIONS**

AUTHORITY

Section 1

Pursuant to the authority vested in the Freedom Planning Board by the Town of Freedom by vote of the Town Meeting, March 14, 1967, and in accordance with NH RSA 674:36, the Freedom Planning Board adopts the following Regulations governing the subdivision of land in the Town of Freedom, New Hampshire.

GENERAL PROVISIONS

Section 2

2:1 **Title.** These Regulations shall be known and cited as the FREEDOM SUBDIVISION REGULATIONS.

2:2 **Jurisdiction.** These Regulations shall pertain to all land within the boundaries of the Town of Freedom and shall be in effect from the time of their adoption by the Freedom Planning Board and recording with the Town Clerk.

2:3 **Administration.** The Planning Board of the Town of Freedom shall administer these regulations.

2:4 **Penalties.** Any owner, or agent of the owner, of any land located within a subdivision in the Town of Freedom who transfers or sells any land before a plat of the subdivision has been approved by the Board and filed with the Registry of Deeds, shall forfeit and pay a civil penalty of \$500 for each lot or parcel so transferred or sold; and the description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the transaction from such penalties. The Town may enjoin a transfer or sale which violates the provisions of RSA 676:16 and may recover the penalty imposed by civil action. In any action to recover a penalty, the prevailing party may recover reasonable court costs and attorney's fees as may be awarded by the Court.

Any violation of these Regulations shall be subject to fines and penalties and the remedy of injunctive relief, as provided in RSA Chapter 676.

2:5 **Severability.** If any section, subsection, sentence, clause or phrase of these Regulations is for any reason held to be unconstitutional or illegal, such invalidity shall not affect the validity of the remaining portion of these Regulations.

DEFINITIONS

Section 3

3:1 Board. The Planning Board of the Town of Freedom.

3:2 Driveway. A road which provides access to a street but serving not more that two adjacent lots.

3:3 Easement. A right of use which one party may have in the land of another, normally, but not limited to, a strip of land used or intended to be used for a sewer or water line, other utility, or driveway.

3:4 Lot. A parcel of land occupied or to be occupied by a main building and the accessory buildings or uses customarily incidental to it. A lot shall be of sufficient size to meet minimum zoning requirements for use, coverage, area and to provide such yards and such open spaces as are required under the Zoning Ordinance. All lots shown on a subdivision plan which has received final plat approval from the Planning Board shall be separate lots regardless of whether these is separate ownership or common ownership of contiguous lots.

3:5 Minor Lot Line Adjustments. Minor lot line adjustments include an exchange of land or moving a common boundary between two abutting LOTS where no new lots are created. An annexation of land between two landowners is included as a minor lot line adjustment.

3:6 Notice. When notice is required, the Board shall give Notice as follows:

- a. The Notice shall include a general description of the proposed subdivision plan which is the subject of the application; shall identify the subdivider and the location of the subdivision; and shall state the day, time, and place of the public meeting/hearing.
- b. A copy of the Notice shall be sent to the abutters and the subdivider by certified mail. The names and addresses shall be furnished by the subdivider as taken from the Town records not more that five (5) days before the day of filing, along with preaddressed envelopes and U.S. Certified Mail Cards.
- c. For the purposes of these Regulations, in counting days, the day on which Notice is given and the day of public hearing/meeting shall be excluded.
- d. Notice shall be mailed at least ten days prior to the public meeting/hearing.
- e. Notice to the general public shall be given by one publication of a copy of the Notice in the Carroll County Independent or Manchester Union Leader or a newspaper of general circulation at least ten days prior to the public meeting/hearing.

3:7 Plat. The final map or plan on which the subdivision is shown.

3:8 Right-of-way. A strip of land occupied or intended to be occupied by a street. The usage of the term "right-of-way" for land platting purposes in the Regulations shall mean that every right-of-way hereafter established and shown on a recorded plat is to be separate and distinct from the lots and parcels adjoining such right-of-way and not be included within the dimensions or areas of such other lots or parcels. Right-of-way does not include Driveway.

3:9 Roadway. The traveled surface of a road including the shoulders on each side.

3:10 Slope. Slope, the steepness of land surface, the composite average slope, excluding wetlands, will be used to compute minimum lot size.

3:11 Soil Type. As defined by the National Cooperative Soil Survey.

3:12 Soil Type Determination. The soil type as determined by a qualified soil scientist or other qualified individual using the standards of the National Cooperative Soil Survey or its equivalent.

3:13 Street. A street shall mean a Class V or better highway, a private road on a subdivision plat which has received final approval by the Planning Board; or a Class VI highway, provided that the requirements of RSA 674:41, I (C) are met.

3:14 Subdivider. Means the division of a lot, tract or parcel of land into two or more lots, plats, sites or other divisions of land for the purpose, whether immediate or future, for sale, rent, lease, condominium conveyance or building development. It includes resubdivision and when appropriate to the context, relates to the process of subdividing or to the land or territory subdivided.

- a) The division of a parcel of land held in common and subsequently divided into parts among the several owners shall be deemed a subdivision.
- b) The grant of an easement in gross to a public utility for the purpose of placing and maintaining overhead and underground facilities necessary for its transmission or distribution network such as poles, wires, cable, conduit, manholes, repeaters, and supporting apparatus, including any unmanned structure which is less than 200 square feet, shall not be construed as a subdivision and shall not be deemed to create any new division of land for any other purpose.

SECTION 4 – Minor Lot Line Adjustments or Boundary Agreements.

The following procedure shall apply to applications for minor lot line adjustments or boundary agreements. Unless otherwise ordered by the Board, an application for a minor lot line adjustments or boundary agreements shall be considered and acted upon at a public meeting without a public hearing.

4:1 Notice is required only to abutters and the applicant.

4:2 A site location map shall be submitted to the Board showing the original boundaries of the adjacent parcels and a detailed plat shall be submitted to the Board showing the new property lines, bearings, distances and all new permanent corner markers, area of two new created lots shall be indicated in acreage and square feet, as a result of the minor lot line adjustment/boundary agreement. Amended 05/18/06

4:3 Any abutter may be heard on the application for review at the public meeting when the matter is discussed by the Board. If deemed necessary, the Board may adjourn its consideration to another date and time to allow further abutter participation. The Board shall review the application and determine if the proposal is a minor lot line adjustment or boundary agreement.

4:4 A statement shall be placed on the plat stating as follows:

öThis plan shows the Minor Lot Line Adjustment/Boundary Agreement and does not require the approval of the Freedom Planning Board as a subdivision.ö

4:5 The Plat shall be filed in the Carroll County Registry of Deeds and a copy with the Freedom Planning Board.

Section 5 – Platting Procedures

Modification or Waiver of Submission Requirements:

Upon written notice, the Board may waive or modify submission requirements in those cases where the information is not essential to the review of the subdivision plan and the subdivider would incur an unnecessary substantial expense.

A. Informal Discussion

5:01 Procedure: Upon request of the subdivider, the Planning Board Chairperson shall place on the agenda of the Planning Board at a regularly scheduled meeting an Informal Discussion between the subdivider and the Board. No fee shall be assessed for the Informal Discussion. No Notice is required.

5:02 Information Requested: The subdivider shall provide the Board with a sketch plan only showing the location and type of the proposed development, with additional information such as general topography including prominent natural features of the tract and how the concept conforms with the Master Plan. Any detailed plan will require postponement and notice to abutters.

5:03 Action of the Board: The Informal Discussion between the subdivider and the Board shall be limited to a discussion of the concept in general terms for the limited purpose of familiarizing the Board with the location and type of development and the subdivider with

general requirements of the Board as set forth in the Regulations. Following the Informal Discussion, and after determining the general character of the proposed subdivision, the Board shall advise the subdivider concerning subsequent procedures and submission requirements.

B. Review of Preliminary Layout

5:04 Procedure: Unless waived by the Board following the Informal Discussion, the subdivider shall submit to the Planning Board Chairperson for review by the Board a Preliminary Layout of the proposed subdivision. No completed application is required. The subdivider may withdraw the preliminary layout at any time and apply for final plat approval.

5:05 Description of Layout: The Preliminary Layout may be drawn in pencil or ink and four (4) copies shall be submitted. Dimensions may be approximate. Data may be tentative but shall be sufficiently clear to establish the basis of and to clarify the design requirements for the subdivision Final Plat. Maps shall be at a scale of no more than 100 feet per inch unless otherwise specified by the Board.

5:06 Information Required: The following information shall be submitted to the Planning Board Chairperson as the Preliminary Layout:

- a) Name of municipality and subdivision; name and address of subdivider and designer or engineer; names and addresses of abutters (all of these items shall appear on the layout).
- b) General site location map locating the boundaries of the subdivision and proposed streets in relation to major roads or other features shown on the Town base map.
- c) Boundaries and area of the entire parcel owned by the subdivider, whether or not all land therein is to be subdivided, references to a Town Highway intersection or USGS bench mark; north point, bar scale, date, and dates of all revisions.
- d) Boundaries and designations of zoning districts within the subdivision; municipal boundary, if any; land use designations from the Zoning Ordinance.
- e) Approximate contours at 5 foot intervals taken from a standard USGS map.
- f) Soil mapping units and boundaries as classified by the U.S. Department of Agriculture Soil Conservation Service. Seasonally wet areas shall be delineated.
- g) Subdivisions and buildings within 100 feet of the parcel to be subdivided; road, streets, and driveways within 200 feet of the parcel to be subdivided.
- h) Location of parks and other open spaces, watercourses, flood-prone area, significant natural and man-made features.
- i) Existing and proposed lot lines; existing and proposed easements, deed restrictions, buildings, accessory buildings, and zoning setback lines.

5:06 Information Required: (continued)

- j) Preliminary road profiles showing grades, existing and proposed street right-of-way lines (including side slopes), widths of streets, proposed names of new streets.
- k) Location of existing and proposed water lines, sewage disposal systems, storm drainage lines, drainage structures and drainage ways; existing and proposed culverts and bridges; existing and proposed telephone, electricity, water, sewer, fire protection lines and other proposed facilities and/or utilities.
- l) Preliminary drainage analysis and computations; watershed areas.
- m) Location and details as to any existing or proposed community water or sewer systems with information on capacity, usage, cost, any charges ó direct or indirect, and a description of the entity responsible for the operation, maintenance and service.

5:07 Review of the Layout: Upon receipt of the Preliminary Layout the Board shall conduct a review of the proposed subdivision at a public hearing. Notice shall be given to the subdivider, the abutters, and the general public. The Board may solicit comments from abutters and other interested persons as it deems appropriate.

5:08 Action of the Board: After review of the Preliminary Layout by the Board, the Board shall submit in writing its recommendations and reservations with respect to the proposed subdivision and the advisability of preparing a Final Plat. The Board shall determine what additional information shall be required for the Final Plat as provided in Section 5:12 (Additional Information for Final Plat). The Board shall make findings as to Section 8:6 (Premature and Scattered) and Section 8:7 (Off-site Improvements) which shall not be changed during final plat review except for good cause.

C. Review of Final Plat.

5:09 Procedure: A completed application for Final Plat approval shall be submitted to the Planning Board and shall contain the information required in Section 5:11 and, if required, 5:12.

5:10 Description of the Final Plat: The proposed Final Plat shall be submitted on four (4) paper prints and one (1) Mylar print.

5:11 Information Required on Final Plat: The Final Plat shall contain or be accompanied by all of the information listed in Section 5.06 for the Preliminary Layout, whether or not a Preliminary Layout has been prepared for the proposed subdivision. In addition, the Final Plat shall contain the following maps and information. Maps shall be drawn at a scale of no more than 100 feet per inch, unless otherwise specified by the Board:

- a) A boundary survey certified by a land surveyor licensed to practice in the State of New Hampshire.
- b) Contour lines at 5 foot intervals for the entire parcel to be subdivided.
- c) Soil test data, sewage disposal information, and approvals as required in Section 8:5.
- d) Boundary survey shall include bearing, distances and location and description of all permanent corner markers. Amended 05/18/06
- e) Existing and proposed lot lines and building sites, angles and dimensions, lot sizes in square feet and acres, consecutive numbering of lots.
- f) Existing and proposed street right-of-way lines; dimensions of tangents, chords, and radii; location of all monuments to be set at street intersections; points of curvature and tangency of curved streets and angles of lots; names of existing and proposed streets.
- g) For all subdivision that involve land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP) the applicant must assure that all necessary permits have been received from those governmental agencies from which approval is required under Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- h) For all subdivisions land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP), proposals for development of greater than fifty (50) lots or five (5) acres (whichever is the lesser), must include Base Flood Elevation (BFE) data (i.e., floodplain boundary and 100-year flood elevation).
- i) All information submitted for the Preliminary Layout as preliminary or estimated shall be in final form for this application.

5:12 Additional Information for Final Plat: As part of the final plat submission, the Board may require the subdivider to submit any or all of the following information which shall be specified in the action of the Board on the Preliminary Layout (Section 5:8).

- a) Subdivision Grading and Drainage Plan: This plan shall be submitted on a separate sheet or sheets and shall provide the following information for the entire area of the proposed subdivision, unless there is a determination by the Board that a lesser area is sufficient:

5:12 Additional Information for Final Plat: (continued)

- 1) Basic street and lot layout, with all lots or sites numbered consecutively.
 - 2) Location of all existing buildings and approximate locations of proposed building, if known.
 - 3) Contours of existing grade at intervals of not more than five (5) feet. Intervals less than 5 feet may be required, depending on the character of the topography.
 - 4) Final identification, location, elevation, grade and/or contours at intervals of not more than five (5) feet for the existing and proposed drainage ways, drainage easements, drainage structures, and water bodies. Intervals of less than 5 feet may be required by the Board, depending on the topography.
 - 5) Final identification and location of proposed soil erosion and sediment control measures and structures.
 - 6) Final drawings and specifications for each proposed soil erosion and sediment control measure in accordance with the standards set forth in Section 8:15.
 - 7) Final drawings, details, and specifications for proposed storm water retention facilities for ground water recharge, if applicable. Amended 02/18/10
 - 8) Final slope stabilization details and specifications.
 - 9) A timing schedule indicating the anticipated starting and completion dates of the subdivision development and the duration of exposure of each area prior to the completion of effective soil erosion and sediment control measures.
- b) Subdivision Street and Utility Plan: This Plan shall be submitted on a separate sheet or sheets and shall provide the following information:
- 1) Complete plans and profiles of all proposed streets, including but not limited to horizontal and vertical curve data at the street center line, street stationing every fifty feet, intersection and turnaround radii, and typical section of proposed streets.
 - 2) Location and details of all existing and proposed utilities (including water mains, telephone, electric, and television distribution lines) on and adjacent to the land to be subdivided.
 - 3) Any other details pertinent to street and/or utility construction.

5:12 Additional Information for Final Plat (continued)

- c) Flood Hazard Plan: For projects involving land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP), the plan shall provide construction drawings, grading and land treatment plans so as to allow a determination that:
 - 1) all such proposals are consistent with the need to minimize flood damage;
 - 2) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and,
 - 3) Adequate drainage is provided so as to reduce exposure to flood hazards. Amended 02/18/10

- d) Requests for Modifications or Waivers: All requests for modifications or waivers as described in Section 8:16 and/or Section 5, Modifications or Waiver of Submission Requirements, shall be included in the Application.

- e) Information If a Performance Bond is Required From The Subdivider: If a Performance Bond is to be requested, the subdivider shall furnish an estimate of the full cost of all improvements and a description of the surety or security to be offered to secure a Performance Bond.

- f) Other Plans: The Board may require such other information as it deems necessary to serve the purposes of these Regulations.

D. Action on Final Plat.

5:13 Submission of an Application for Final Plat Approval:

- a) Necessity for Acceptance of a Completed Application: Before any review of the proposed final subdivision Application, the Board shall first determine if the Application is complete.
- b) Time for Filing an Application: The subdivider shall file the Application for Final Plat approval with the Planning Board Chairperson or other person designated by the Board at least 20 days prior to the public meeting at which the Application is to be considered for acceptance by the Board.

5:13 Submission of an Application for Final Flat Approval: (Continued)

- c) Action by the Board on the Request to Accept the Completed Application: The Application shall be presented to the Board by the subdivider at a public meeting of the Board for which Notice has been given. The Board, by motion, shall accept or reject the Application at the public meeting or an adjourned session thereof, and such action shall be noted on the Application and in the records of the Board.

5:14 Consideration and Action on Final Plat: The accepted application shall be deemed to be submitted to the Board as of the date on which the Board Accepted the completed Application. Within 30 days of such date, the Board shall begin formal consideration of the Application at a public hearing for which Notice has been given. The Board shall act to approve, approve with modifications, or disapprove the Application within 90 days or the date of submission. The Board may apply to the Board of Selectmen prior to the expiration of the 90 day period for an extension of time not to exceed 90 days before acting to approve or disapprove the Application. The subdivider may consent to an extension of time for the Board to act beyond the initial 90 day period on the condition that such consent shall be in writing and shall be made part of the Board's record.

5:15 Notice for Meeting/Hearings and Adjournments: Notice shall be given to the abutters, the subdivider, and the general public as to all public hearings on the application. As provided by law, any public meeting or public hearing for which Notice was required may be adjourned without additional Notice. The board shall announce at the prior public meeting or prior public hearing that such meeting or hearing shall be adjourned to a fixed day, time, and place. For an adjournment, the records of the Board must contain a statement that such announcement was made and include also the day, time, and place when the adjourned meeting/hearing is to be held.

5:16 Failure of the Board to Approve or Disapprove the application within the Specified Time Limit: The subdivider, upon the failure of the Board to approve or disapprove of the Application within the time specified, may obtain from the Selectmen an order directing the Board to act within 15 days. The failure of the Board to act within 15 days shall constitute grounds for the Superior Court, upon petition of the subdivider, to issue an order approving the Application if the Court first determines that the proposed subdivision complies with the existing Subdivision Regulation, Zoning, and other applicable Ordinances.

5:16 Failure of the Board to Approve or Disapprove the Application within the Specified Time Limit: (continued)

If the Court determines that the failure to act within the time specified was the fault of the Board and was not justified, then the court may order the Board to pay the subdivider's reasonable costs and attorney's fees incurred in securing the Court order.

5:17 Notice of Action on the Final Plat: The board shall notify the subdivider, by Notice in writing signed by the Chairman, of its actions on the Final Plat. In case of disapproval, the grounds for such disapproval shall be set forth in the Notice which shall become part of the records of the Board. In case of approval, the Notice of Action shall set forth the following when applicable:

- a) A copy of any deed restrictions submitted by the subdivider and accepted by the Board.
- b) All requirements for off-site improvements.
- c) A description of land, if any, to be dedicated to widen existing streets.
- d) A description of any modification or waiver granted to the subdivider.

5:17 Notice of Action on the Final Plat (continued)

- e) Requirements, if any, relative to underground utilities.
- f) All agreements, if any, between the subdivider and the Board concerning matters not required by these Regulations, but to be performed by the subdivider.
- g) A statement that all improvements required by the Planning Board shall be completed and constructed at the sole expense of the subdivider or successors and assigns of the subdivider regardless of the amount of the bond.
- h) A reference to the Bond to be provided by the subdivider as guarantee of performance in construction of the subdivision, as set forth in Section 8:13.

5:18 Acknowledgement of Receipt of Notice of Action: The subdivider shall acknowledge receipt of the Notice of Action and acceptance of all provisions set forth therein and shall return a signed copy of same to the Board for its records. Until such acknowledgment and acceptance has been filed with the Board, no further action shall be taken with regard to the Final Plat. Failure to acknowledge receipt of Notice of Action and acceptance within 90 days of mailing of the Notice of Action will cause approval to lapse.

5:19 Performance Bond, Time for Completion of Improvements and Time Extensions: When the Board agrees to accept a Performance Bond or other security, the subdivider shall submit the security providing for and securing to the Town the completion of the actual construction and installation of all improvements and utilities required by the Board within 3 years from the date of acknowledgment and acceptance of the Notice of Action. The security shall be in an amount determined by the Planning Board and in conformity with the requirements of Section 8:13. Regardless of the amount of security, the subdivider shall be liable for the entire cost of constructing and installing all improvements required by the Board. The time for completion may be extended a reasonable time for good cause as determined by the board.

5:20 Description and Recording of Final Plat: The subdivider shall submit to the Board four (4) copies of the approved Final Plat with an additional plan of Mylar. Sheet sizes shall be in accordance with the requirements of the Carroll County Register of Deeds. Space shall be reserved on the Plat for endorsement by the Board. The Final Plat shall contain the following statement:

öThe Subdivision Regulations of the Town of Freedom and the Notice of Action are a part of the Plat, approval of this Plat requires the completion of all the requirements of the Notice of Action and said Subdivision Regulations excepting only any variance set forth in the Notice of Action.ö

The Planning Board Chairperson shall cause one Mylar copy of the Plat to be recorded in the Carroll County Registry of Deeds and shall deliver the second copy to the Town for its records. All graphic material and presentations shall be on that surface of the Plat which is suitable for

writing. The act of recording an approved subdivision Plat shall not in itself constitute acceptance by the Town of any street or easement shown thereon.

5:12 Time to Record Plat and Extensions: Approval of a Final Plat shall lapse if such Plat is not recorded in the Registry of Deeds within 3 years from the date of acknowledgments and acceptance of the Notice of Action unless the Planning Board extends the time for good cause.

SECTION 6. MINOR SUBDIVISION

A. Definition.

6:01 Definition: A Minor Subdivision is any division of land resulting in no more than 3 lots, each fronting on an existing street, and not involving any new street or extension of municipal facilities nor the creation of any public improvements.

B. Procedure.

6:02 Procedure for Review: The Minor Subdivision process requires only the submission of the Final Plat, as set forth below. At an Informal Discussion with the subdivider, the Board shall first determine that the proposed subdivision qualifies for the Minor Subdivision procedure, following which the subdivider may submit the Final Plat immediately or at a subsequent meeting of the Board. Review of the Final Plat shall be in accordance with the procedures in Section 5C and D.

6:03 Expansion of Procedures: If, in the judgement of the Board, the subdivision as presented does not constitute a Minor Subdivision, the Board shall require the subdivision to be reviewed as a Major Subdivision.

6:04 Standards: All Minor Subdivisions shall conform to applicable standards set forth in Section 8. In addition, the subdivision shall be designed to accommodate possible future subdivision of the same parcel of land or contiguous land.

6:05 Restriction on Further Subdivisions: A parcel of land which has been subjected to minor subdivision shall not be eligible for further subdivision under the Minor Subdivision procedures for a period of 10 years from the date of the most recent minor subdivision.

C. Submission Requirements.

6:06 Description of Final Plat: The Final Plat to be signed and recorded shall be Mylar. Sheet sizes shall be in accordance with the requirements of the Carroll County Registry of Deeds. Space shall be reserved on the Plat for endorsement by the Board. The Final Plat shall contain the following statement:

ōThe Subdivision Regulations of the Town of Freedom and the Notice of Action are a part of the Plat, and approval of this Plat requires the completion of all the

requirements of the Notice of Action and said Subdivision Regulations excepting only any variance set forth in the Notice of Action.ö

For the purpose of the public hearing, the proposed final plat shall be submitted on four (4) paper prints and one (1) Mylar print.

6:07 Information Required: For Minor Subdivision, the map shall be drawn at a scale of no more than 100 feet per inch, unless otherwise specified by the Board. The Final Plat shall contain the following information:

- a) Name of municipality and subdivision; names and addresses of the subdivider and the designer.
- b) Names and addresses of abutting property owners, subdivisions and buildings within 100 feet of the parcel to be subdivided; roads, streets, and driveways within 200 feet of the parcel to be subdivided.
- c) Name and seal of land surveyor licensed by the State of New Hampshire who prepared the Final Plat.
- d) A general site location map locating the proposed Minor Subdivision boundaries in relation to major roads.
- e) Boundaries and areas of the entire parcel referenced to a Town Highway intersection or USGS bench mark; north point, bar scale, date and dates of any revisions. The Board may waive the requirement of a perimeter survey for the entire parcel and may require specific data only for lots for which sale or lease is contemplated; in such instances, the Final Plat shall include a general map insert which indicates approximately the size and shape of the entire parcel to be subdivided.
- f) Approximate contour lines at 5 foot intervals for the entire parcel, sketched from a standard USGS map or a Town base map.
- g) Existing and proposed building sites, angles and dimensions, lot sizes in square feet and acres, consecutive numbering of lots. Amended 05/18/06
- h) Location of existing and proposed easements, deed restrictions, zoning setback lines, parks and other open space, water courses, and significant natural and man-made features.
- i) Soil test data, sewage disposal information and approvals as required in Section 8 (General Requirements). (The planning board may act on your application before all approvals, but will not grant final approval until all approvals are received.)
- j) Boundaries and designations of Zoning Districts within the subdivision; municipal boundary, if any; land use designations from Zoning Ordinances.

6:08 Other information: When in the judgement of the Board additional information is required to serve the purposes of these Regulations, the Board may require such other information as set forth in Section 5.11 and 5.12, Final Plat requirements.

SECTION 7. Major Subdivision.

7:01 Definition. A Major Subdivision is any division of land which results in 4 or more lots or which requires new streets, utilities, or public improvements.

7:02 Standards: All Major Subdivision shall conform to the requirements in Section 8 (General Requirements).

7:03 Procedure for Review: The procedures of Section 5 (Platting Procedures) shall be followed for the review of a Major Subdivision. These procedures involve three steps: an Informal Discussion for which no fee shall be required; a review of the Preliminary Layout; and a review of and action on the Final Plat. Further consideration of the subdivision after Informal Discussion will be at public hearings for which notice has been given or where there has been an adjournment in compliance with Section 5:15.

7:04 Submission Requirements: Submission requirements for Major Subdivision shall be as set forth in Section 5:11 and 5:12.

GENERAL REQUIREMENTS

Section 8

8:1 Character of Land.

- a) **Unsafe Land.** The board shall prohibit or restrict subdivision of any land which is found by the Board to be unsafe for development by reason of being subject to flood, erosive stream action, unstable slope or fill, or otherwise located in a situation so that safe healthful development cannot be maintained on the land.
- b) **Unsuitable Land.** The Board shall restrict subdivision of land which is found by the Board to be suitable for development by reason of high water table, bed rock or other impervious strata close to the surface or excessive slope.
- c) **Part of Lot.** The board may permit, as to unsafe and unsuitable land, which it is platted as part of a lot in which there is sufficient safe and suitable land to satisfy the requirements of these Regulations as to minimum lot size.
- d) **Ponds, Streams and Wetlands.** In cases not regulated by an agency of the State of New Hampshire, the Board will not normally permit the filling and dredging of any part of a pond beyond the normal high water line, including adjoining swamps, marshes and bogs; the obstruction or partial obstruction of the normal flood bed of any stream or natural waterway;

the changes of course of such streams or waterways; or the filling of any adjoining swamp, marsh or bog. This provision will not be deemed to prevent the normal improvement of beaches or of the bed of a stream or waterway for proper drainage.

8:2 Lots.

a) **Lot Sizes and Areas.** The minimum lot size for each lot shall be in conformance with both the Zoning Ordinance and Table 1 which considers the soil type and slope of the land in determining lot size.

b) Permanent markers shall be established at each corner of all lot lines. Amended 05/18/06

- (1) Table 1 contains the required minimum lot sizes for specified soils and slopes for single family residences of not more than four bedrooms.
- (2) Soil type of lot shall be as delineated by the National Cooperative Soil Survey in the "Soil Survey of Carroll County, New Hampshire," issued December, 1977, and as may be amended. When a request is made for definition stating that a soil type of a lot has been incorrectly delineated, the Board shall determine which lot size in Table 1 applies. When a lot had more than one soil type, the percent of each soil type will be taken into account proportionately in determining the minimum lot size.
- (3) The slope of the land may be determined by reference to topographic information provided by a Registered Land Surveyor or Professional Engineer and show on the subdivision plan submitted. Contours at five (5) foot intervals (or less, when required by the Board) shall be shown. For purposes of these Regulations, the slope of each lot shall be determined by finding the average slope, measured perpendicular to the contours through the point on the lot where a building would logically be placed. For lots with variable elevation, the composite average slope, excluding wetlands, will be used to compute the minimum lot size. No areas where the average slope exceeds 25% may be used to fulfill any part of the lot size requirement.
- (4) Wetlands may not be used to fulfill part of the minimum lot size.
- (5) **Lake Shore Areas.** In lake shore areas, minimum lot sizes for each soil type shall be increased by 33 1/3% of the minimum requirement as stated in Table 1.
- (6) In subdivisions where a community water supply and/or community wastewater systems is (are) to be provided, minimum lot sizes may be decreased by 33 1/3% of the minimum requirements as stated in Table 1 but no less than the minimum lot areas in the Zoning Ordinance.
- (7) Lot sizes for residential 5 to 10 bedrooms: Minimum lot sizes shall be proportionally larger than the minimum lot size given in Table 1 by the following formula:

Lot Size equals $N/4 \times$ lot size from Table 1. N is the number of bedrooms.

8.2 Lots (Continued)

(8) Lot sizes for commercial and/or residential (over ten (10) bedrooms): Lot sizes will be determined by application of the following formula:

$$\text{Size=} \frac{\text{O (gpd)}}{2000 \text{ (gpd/acre)}} \times \frac{\text{Lot size indicated for soil type in Table 1}}{35,000 \text{ square feet}}$$

Q equals gallons of wastewater discharged per day.

8:3 Grading and Drainage. Lots shall be laid out in relation to the topography and graded sufficiently to provide adequate drainage for the purpose intended without diversion of water onto other lots or onto property adjoining the subdivision. Excessive grading and removal of natural cover will not be permitted. A drainage plan will be required if new roads are to be constructed.

8:4 Streets.

a) Arrangements. Streets shall be logically related to the topography so as to produce usable lots, reasonable grades and safe intersections in appropriate relation to the proposed use of land. The arrangement of streets in the subdivision shall provide for the continuation of the principal streets in adjoining subdivisions, or for their proper projection when adjoining property is subdivided. So far as practicable, the arrangement should avoid excessive street grades with extensive cut and fill.

c) Intersections. Streets should be laid out in intersections as nearly as possible at right angles, and no angle of intersection of less than sixty (60) degrees shall be permitted. Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum offset of two hundred seventy five (275) feet between their center lines. Intersecting property lines at street intersections shall be joined by a curve of at least twenty (20) feet radius.

d) Widths. No street right-of-way shall be less than fifty (50) feet in width, and may be required to be more; whether the street be new or existing. The width of the roadway in a subdivision of more than one (1) lot shall be not less than twenty (20) feet. Dead end streets shall be provided with a turn-around at the closed end with a right-of-way with a minimum radius of 75 feet and with a roadway consisting of the area of a circle with a minimum radius of 65 feet to the outside edge.

e) Access to Water For Fire Fighting. All subdivisions with frontage on bodies of water shall provide year-round access at suitable intervals for fire fighting equipment to such bodies of water.

f) Drainage. A drainage swale at least three (3) feet in width and sixteen (16) inches in depth at its midpoint below the street center line grade shall be constructed in each street right-of-way on each side of the roadway unless the street is provided with curbs and gutters; or

unless topography and or soil conditions makes such swales unnecessary. No water shall be permitted to run across the street on the surface but shall be directed into ditches or catch basins, and shall be piped underground in a pipe of sufficient size as to carry the normal flood flow of water; provided that no such pipe or culvert shall be less than fifteen (15) inches in diameter. Culverts of not less than fifteen (15) inches in diameter must also be installed where any obstruction prohibits the flow of water runoff such as driveways or new additional roads and in accordance with general roadway construction.

g) Requirements for Class V Town Road Construction In Freedom

Design Speed $\hat{=}$ 40 mph (Maximum legal speed 35 mph)

Minimum Stopping Sight Distance $\hat{=}$ 275 feet. The criteria for measuring stopping sight distance is as follows: Height of driver's eye 3.75 feet and height of subject 0.5 feet.

Maximum Grades $\hat{=}$ Flat 7% - Rolling 8% - Mountainous 10%
For ADT's below 250 grades of relatively short lengths may be increased to 150% of the value shown.

Maximum Degree of Curve $\hat{=}$ Minimum Radius 460 feet.

Maximum Superelevation $\hat{=}$ 1 in/ft.

Drainage $\hat{=}$ Must provide structures to carry area drainage without erosion, minimum culvert size 15 inches diameter and to be tarred galvanized steel or concrete with sealed joints.

Gravel Base $\hat{=}$ Base gravel shall be medium to coarse bank run gravel: for ADT (Average Daily Trips) up to 250 $\hat{=}$ 12 inches minimum; for ADT 250 $\hat{=}$ 400 18 inches minimum; and for ADT over 400 $\hat{=}$ 24 inches minimum.
New Hampshire State Standard Specifications Section 304 shall apply.*

Gravel Top $\hat{=}$ On top of the Gravel Base shall be application of up to one and one-half inch crushed gravel: for ADT up to 250 $\hat{=}$ 4 inches; for ADT over 250 $\hat{=}$ 6 inches.
New Hampshire State Standard Specifications Section 304 shall apply.*

Surfacing Cross Slopes $\hat{=}$ $\frac{1}{4}$ in/ft.

Surface Width $\hat{=}$ Minimum 20 feet for ADT below 250 and 22 feet for ADT 250 or more.

Surface Type $\hat{=}$ For ADT under 250 $\hat{=}$ H. Bit. Conc. 2.0 inch base, 1 inch wearing; for ADT 250 or more $\hat{=}$ H. Bit. Conc. 2 inch base, 1 inch wearing. (H. Bit. Conc. Refers to Hot Laid Bituminous Asphalt pavement in accordance with New Hampshire Standard Specifications, Section 403.) *Reference $\hat{=}$ Standard Specification for Road and Bridge Construction $\hat{=}$ 2002 or later edition. NHDOT

8.4 Street (Continued)

(f) Requirements for Class V Town Road Construction in Freedom: (Continued)

Grade Shoulder- Minimum 6 feet (up to one and one-half inch crushed bank run gravel) 3 feet on each side.

Slopes ó In slope to ditch 4:1
Cut or Fill 4:1 to 2:1
Guard Rail (single beam steel) on 2:1 filled slopes or in cases where 8 or more feet of fill is required to maintain maximum grades.

Right-of-Way ó Minimum 50 feet (with boundary markers in place) to be cleared of any obstruction to 12 ft. beyond the edge of the shoulder to allow proper snow removal.

Inspections ó Inspections are to be made by the Selectmen or their appointed representative at the following times:

- a. after the right of way has been prepared for gravel;
- b. after the base gravel is in place;
- c. after the gravel top is in place;
- d. during the application of the pavement;
- e. final inspection when all work is completed.

New Hampshire State Standard Specifications Section 304 shall apply.*

All fees are to be paid by the developer.

Right-of-Way Preparation ó All trees, brush, boulders, stumps and top soil shall be removed from the entire width of the right of way.

Dead End Streets ó A cul de sac must be a minimum of a 75 foot radius with a minimum paved radius of 65 feet. No dead-end street shall be more than 800 feet in length, measured along its center line.

Traffic Signs ó The developer shall furnish and install all necessary traffic signs and street signs as specified by the Selectmen or their appointed representative.

8:5 Sewage Disposal and Water Supply.

- a) **On-Site Sewage Disposal Design Standards.** The board will not approve a subdivision which creates a lot or site that will not meet the minimum standards and design requirements imposed by the State of New Hampshire Department of Environmental Services, Town ordinances and the requirements listed below.

8:5 Sewage Disposal and Water Supply (continued)

- b) The Board requires that all soil tests (test pits and percolation tests) be performed by a certified sewage disposal system designer and, if required by the Board, in the presence of and certified by a representative of the Board designated to inspect soil tests for the purpose of these Regulations. All test pits shall be carefully analyzed to determine seasonal high water table. Seasonal high water table shall be established by (A) clear indications of mottling and other color changes, (B) a soil scientist from the Natural Resource Conservation Service, or (C) digging a test pit in the wet season. All test pits and percolation tests shall be shown on the plan.
- c) The Board reserves the right to determine the number and location of percolation tests and test pits. No septic system may be constructed within 125 feet of the 50 year floodplain.
- d) Soils data shall consist of available soil survey information and soil test results and shall be shown on the plat.
- e) All test pits shall be dug to a minimum depth of ten (10) feet or refusal if ledge. Depth to ledge, clay, hardpan layers, and existing seasonal high water table shall be recorded on the plat.
- f) Sufficient test pits shall be dug to insure that an area of twice the design leachfield area, but not less than 4,000 square feet, is present on each proposed lot with a natural soil depth of at least four (4) feet to bedrock. One-half of this area shall be reserved as a backup if the initial leachfield fails and shall not be used for buildings, sewage treatment and septic effluent disposal except in the event of field failure. If such an area is not present, the lot shall be disapproved.
- g) The sewage disposal system must be so designed that:
 - 1) Subsurface and surface runoff waters will be diverted from the leached area.
 - 2) No part of the sewage disposal system, including the backup leachfield area, shall be located closer than 125 feet from any wetland, river or stream.
- h) Any soil with a seasonal high water table at or within two (2) feet of the natural ground surface shall not be used for the disposal of septic tank effluent. Drainage, where feasible and acceptable to the Board, may be utilized to overcome this situation.
- i) All plans for septic systems to be installed in the Town of Freedom will be submitted to the Selectmen, or their appointed representative to review and approve before being sent to Department of Environmental Services for Construction Approval.

8:6 Premature and Scattered. Danger to the Public Through Insufficiency of Services:

Whenever a proposed subdivision poses a danger to the public through insufficiency or services, such subdivision shall be premature or scattered and shall not be approved. The Board shall determine, based on the information presented and other information available and made part of the record, whether or not the amount of the development contained in the proposed subdivision, in relation to the services available, will create danger. The Board shall consider but not be limited to the following:

- a. Adequacy of water supply;
- b. Adequacy of drainage;
- c. Adequacy of transportation;
- d. Adequacy of schools;
- e. Adequacy of fire protection, police and other emergency services;
- f. Adequacy of other public services;
- g. The necessity of excessive expenditures of public funds for the supply of any or all of the inadequate services and whether or not such expenditures will place an unreasonable burden on the Town.

The Board shall bear in mind that the proposed subdivision is not an island but an integral part of the community which must mesh efficiently with the Town's pattern of streets, water lines and other installations which provide essential services and vehicular access.

8:7 Off-Site Improvements. If the board determines that the proposed subdivision will adversely affect existing public facilities, such as streets, sidewalks, drainage, and water supply, causing them to be inadequate to meet the additional needs created by the subdivision, then the subdivider shall pay a reasonable share for such upgrading of the public facilities to an extent necessary to protect the public interest. If other properties benefit from the upgrading of such off-site public improvement, the Board shall determine the portion of the cost to be paid by the subdivider, taking into consideration the following elements:

- a. The character of the area.
- b. The extent that other public and private property will be benefited by the upgrading, and
- c. Any other factors that the Board deems appropriate to establish a rational connection between the needs created by the subdivision and the amount to be paid by the subdivider.

8:7 Off-Site Improvements (Continued)

If the Town's share shall constitute an unreasonable burden on the Town, then such subdivision shall be premature unless the subdivider agrees to pay a larger share or reduces the size of the subdivision.

8:8 Community Water Supply and Sewage Disposal Systems. The design of any community water supply or sewage disposal systems to be provided by the subdivider shall be approved by Department of Environmental Services before the Board will grant final approval. The Board may impose additional requirements based on a review and recommendations of a Professional Engineer.

8:9 Easements. Easements shall be provided as required by topography and use for utilities and other special purposes as foreseen by the Board or subdivider.

8:10 Parks and Playgrounds. Areas set aside for parks and playgrounds to be dedicated or to be reserved for the common use of all property owners in the subdivision, whether or not required by the Board, shall be of reasonable size and character for the intended use.

8:11 Reserve Strips. Reserve strips of land which in the opinion of the Board show an intent on the part of the subdivider to control access to land dedicated or to be dedicated to public use shall not be permitted.

8:12 Operation and Maintenance of Common Facilities. The Board will approve no subdivision with a community water supply or sewage disposal system subject to regulation by Department of Environmental Services until provision satisfactory to the Board is made for the continued operation and maintenance of such systems. The Board encourages, and may require, the subdivider to establish a community association to provide continued maintenance of such community utilities, streets, parks and playgrounds and beaches as may not be dedicated to public use and accepted by the Town.

8:13 Security in Lieu of Completion of Required Improvements. When the Board agrees to accept security, the subdivider shall submit the security providing for and securing to the Town the completion of the actual construction and installation of all improvements and utilities within three years from the date of the decision of the Planning Board. The security shall be in the amount determined by the Planning Board. Regardless of the amount of the security, the subdivider shall be responsible for and shall pay the actual cost of the construction and installation of all improvements.

In the event the subdivider desires to obtain an endorsement on the final plat and the recording of the plat in the Registry of Deeds in order sell lots in the approved subdivision prior to the construction of the improvements, the subdivider may request the Planning Board to accept security in lieu of the completion of the improvements.

8:13 Security (continued)

- a. Form of Security: The subdivider shall execute and deliver to the Board in a form acceptable to Town Counsel, security to secure the performance of all terms and conditions of the Notice of Action.
- b. Amount of Security: The subdivider's engineer shall furnish to the board an estimate of the full cost of all improvements. Such estimates shall be reviewed by the Board and any other person designated by the Board. The Board shall then determine the amount of the security.
- c. Surety or Security: The subdivider's obligations as set forth in the security shall be secured by a surety or such other security as approved by the Town Counsel and the Board of Selectmen. A real estate mortgage is not acceptable security. All documents evidencing or establishing the surety or the security shall be prepared at the subdivider's expense and approved by Town Counsel.
- d. Reduction of Security: The security may be reduced during the course of construction by the Board in such amount as the Board deems to be in the best interest of the Town but on the condition that the remaining security shall be sufficient to complete all remaining construction.
- e. Release of Security: The security shall be released when the Board is satisfied that the subdivider has complied with all requirements as set forth in the decision of the Boards. The decision to release the security will be based on a review of the final plans and the completed work.
- f. Enforcement of Security: If the subdivider has not complied with the construction and installation of all improvements required by the Planning Board within three years of the date, the Town shall enforce its rights under the security. In the event that the Town is required to incur legal expenses in the course of enforcing any security, it shall be entitled to have reasonable attorney's fees paid by the subdivider and awarded by the court.

8:14 Street Names: Streets which join or are in alignment with streets of abutting or neighboring properties shall bear the same names. Names of new streets shall not duplicate, nor bear phonetic resemblance to the names of existing streets within the Town and shall be subject to the approval of the Selectmen.

8:15 Sediment and Erosion Control Standards. The following standards shall be observed by the subdivider in the design, layout and engineering of the subdivision.

- a) Stripping of vegetation, regarding or other development shall be done in such a way that will minimize on-site and off-site soil erosion.
- b) Whenever practical, natural vegetation shall be retained, protected and supplemented.

8:15 Sediment and Erosion Control Standards. (continued)

- c) The disturbed area shall be kept to a minimum, and the duration of exposure shall be less than a maximum of six months.
- d) Temporary seedlings and/or mulching shall be used to protect critical areas during development.
- e) The subdivider shall make provision to accommodate the increased runoff caused by changed soil and surface conditions during the after development.
- f) The subdivider shall make reasonable effort to trap sediment in the runoff water until the disturbed area is stabilized by the use of sediment basins or other acceptable methods.
- g) Diversions, sediment basins, and other erosion control mechanisms shall be constructed by the subdivider prior to any on-site grading or disturbance of existing surface material.

8:16 Utilities and Communication Deliveries. All utilities and communication lines and systems in a major subdivision shall be placed underground in conformity with the terms and specifications of the utility company and communication company involved.

8:17 Modifications or Waivers. A subdivider may request the modification or waiver of a standard or requirement contained in Section 8. The Board may grant such request if it determines that compliance is not required to meet the purpose and intent of these Regulations and that the public good will not be adversely affected.

ADDITIONAL FEES

SECTION 9

The Board shall have the right in its discretion to request in the appropriate cases that the subdivider pay reasonable fees in addition to the regular fees to cover its administrative expenses and costs of special investigative studies, review of documents, extraordinary or unusual legal expenses, and other matters which may be required by particular applications.

Before imposing such additional fees upon a subdivider, the Board shall determine what special investigative study, review of documents, or other matters, are required by a particular application together with an estimate of the cost to be incurred. The Board, by Motion, shall determine the necessity of the additional fees. The Board shall require the subdivider to pay the amount of estimated fees to the Town in advance. If the estimate of the additional fees is less than the actual cost, then the Board shall cause to be sent to the subdivider a description and the reasons for the additional cost and the subdivider shall then pay an amount equal to the additional cost.

In the event that it is necessary for the Town to take legal action against a subdivider to collect unpaid fees, then the Town shall be entitled to an award of reasonable attorney's fees incurred in collection of the unpaid amount.

AMENDMENTS

SECTION 10

These Regulations may be amended by the Board as provided in RSA 675:6, which requires a public hearing prior to amendment and notice as required by RSA 675:7. After the completion of the public hearing, the amendment may be adopted by an affirmative vote of the majority of the members of the Board. A copy of the amendment shall be certified to by a majority of the Board and shall be filed with the Freedom Town Clerk who shall note thereon the date of the recording. The amendment shall be legal and shall be in effect upon recording of the certified copy with the Freedom Town Clerk. A copy of the certified copy filed with the Freedom Town Clerk shall be sent to the Office of State Planning, RSA 675:9.

AUTHORITY, ADOPTION AND AMENDMENT

SECTION 11

Authority granted to the Freedom Planning Board by the voters of the Town of Freedom March 14, 1967.

Original Subdivision Regulations adopted January 16, 1969.

Amended June 19, 1980.

Amended January 20, 1983.

Amended November 16, 1989.

Amended April 18, 2002.

Amended June 16, 2004

Amended May 18, 2006

APPENDIX A

TABLE I
MINIMUM LOT SIZES BASED ON SOIL AND SLOPES
(in square feet)

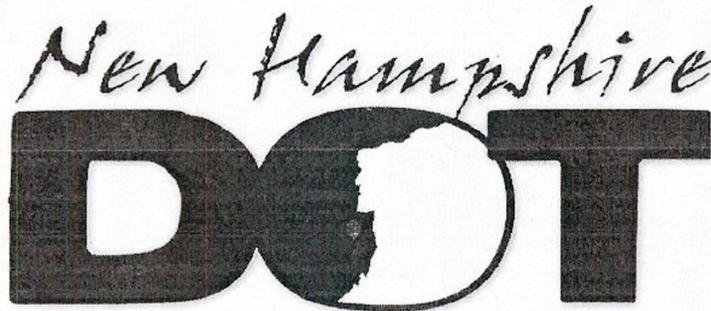
Soil Map	Soil Type	A, 0-3%, B, 3-8%	Slope, C, 8-15%	D, 15-25%
Ac, Ad	Acton	64,000.00	70,400.00	83,200.00
Am	Adams	40,000.00	44,000.00	48,000.00
Aw	Agwam	52,000.00	57,200.00	62,400.00
	Alluvial Land	NP	NP	NP
	Au Gres	120,000.00	n/a	n/a
Bc, Be, Bk	Becket	64,000.00	70,400.00	83,200.00
Bs, Bt, Bv	Berkshire	52,000.00	57,200.00	62,400.00
Cd, Ce	Canaan	58,000.00	64,000.00	69,200.00
Cf, Cl	Charlton	52,000.00	57,200.00	62,400.00
Cm	Chocorua	NP	NP	NP
Cn	Colton	40,000.00	44,000.00	48,000.00
Cy	Croghan	64,000.00	70,400.00	83,200.00
De	Deerfield	64,000.00	70,400.00	83,200.00
Dn	Duane	64,000.00	74,000.00	83,200.00
Fa	Fresh Water Marsh	NP	NP	NP
Gl, Gs, Gt	Gloucester	40,000.00	44,000.00	48,000.00
Gw	Greenwood	NP	NP	NP
Ha	Hadley	NP	NP	NP

Hf, Hm, Hn, Ho Soil Map	Herman Soil Type	40,000.00 A, 0-3%, B, 3-8%	44,000.00 Slope, C, 8-15%	48,000.00 D, 15-25%
Hs	Hinckley	40,000.00	44,000.00	48,000.00
Ht, Hv, Hx	Hollis	58,000.00	64,000.00	69,200.00
Ld, Lf	Leicester	NP	NP	NP
Lk, Lm	Limerick	NP	NP	NP
Ln, Ls, Lv, Ly	Lyman	58,000.00	64,000.00	69,200.00
Ma, Md, Mi	Marlow	64,000.00	70,400.00	83,200.00
Ml, Ms	Mills	64,000.00	70,400.00	83,200.00
Mu	Muck/Peat	NP	NP	NP
Na	Naumberg	NP	NP	NP
Nc	Nicholville`	64,000.00	70,400.00	83,200.00
Of, Oh, Os	Ondawa	NP	NP	NP
Ot	Ossipee	NP	NP	NP
Pa, Pd	Paxton	64,000.00	70,400.00	83,200.00
Pe, Pl	Peru	64,000.00	70,400.00	83,200.00
Po	Podunk	NP	NP	NP
Ra	Raynham	NP	NP	NP
Rg, Rl	Ridgebury	120,000.00	n/a	n/a
Ro, Rp	Rock/outcrop	NP	NP	NP
Sa	Salmon	40,000.00	44,000.00	48,000.00
Sd	Scituate	64,000.00	70,400.00	83,200.00
Se	Skerry	64,000.00	70,400.00	83,200.00
Sf	Suncook	NP	NP	NP

Soil Map	Soil Type	A, 0-3%, B, 3-8%	Slope, C, 8-15%	D, 15-25%
Sn, Su	Sutton	64,000.00	70,400.00	83,200.00
Wa, Wb	Waumbek	64,000.00	70,400.00	83,200.00
Wc	Whitman	NP	NP	NP
Wn	Winooski	NP	NP	NP
Wo, Wv	Woodbridge	64,000.00	70,400.00	83,200.00

NP = Septic systems not permitted on these soils- cannot be included in minimum lot size determination.

***STANDARD
SPECIFICATIONS
for
ROAD AND BRIDGE
CONSTRUCTION***



**STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION**

August 2010

APPROVED: 
CHIEF ENGINEER

8/17/10
DATE

DIVISION 300-- BASE COURSES

*SECTION 304 -- AGGREGATE BASE COURSE***Description**

1.1 This work shall consist of furnishing and placing base courses on a previously prepared subgrade or course as shown on the plans or as ordered.

1.2 This work shall also include raising the grade of the edge of the roadway shoulders with crushed aggregate as shown on the plans or as ordered to match the grade of the pavement course placed on the shoulders or to provide a base for shoulder pavement.

Materials**2.1 General.**

2.1.1 The materials shall consist of hard, durable particles or fragments of stone or gravel. Materials that break up when alternately frozen and thawed or wetted and dried shall not be used for aggregate base course materials. Fine particles shall consist of natural or processed sand. The materials shall be free of harmful amounts of organic material. Unless otherwise specified, the percent wear of base course material shall not exceed 50 percent as determined by AASHTO T 96, Grading A.

2.1.2 Crushed stone shall be processed material obtained from a source that has been stripped of all overburden. The processed material shall consist of clean, durable fragments of ledge rock of uniform quality and reasonably free of thin or elongated pieces.

2.1.3 Materials for glass cullet shall either be separated/recyclables received from a recycling facility permitted (pursuant to RSA 149-M:10) by the Waste Management Division of the Department of Environmental Services and/or materials certified for Direct Re-Use in accordance with Section 318 of the New Hampshire Solid Waste Rules.

2.1.3.1 Glass cullet shall meet the requirements of AASHTO M318.

2.2 **Gradation.** The required gradation of base course material shall conform to Table 1.

2.3 **Sand.** The maximum size of any stone or fragment shall not exceed three-fourths of the compacted depth of the layer being placed but in no case larger than 6 in. (150 mm).

2.4 **Gravel.** The maximum size of stone particles shall not exceed three-fourths of the compacted thickness of the layer being placed but in no case larger than 6 in. (150 mm).

2.5 **Crushed gravel.** At least 50 percent of the material retained on the 1 in. (25.0 mm) sieve shall have a fractured face.

2.6 **Crushed gravel for shoulder leveling.** This material shall consist of crushed aggregate for shoulders meeting the gradation requirements of Table 1 and shall then be mixed with at least 25 percent by volume of loam meeting the requirement of 641.2.1.

2.7 **Crushed aggregate for shoulders.** This material shall meet the gradation requirements of Table 1.

2.8 **Gravel for drives.** The material shall meet the requirements of gravel as shown in Table 1.

2.9 **Crushed gravel for drives.** The material shall meet the gradation requirements of either crushed gravel or crushed stone (fine) as shown in Table 1.

2.10 **Crushed stone base course (fine gradation).** Acceptable sand may be blended as necessary to obtain the proper gradation for the fine aggregate portion.

SECTION 304

Table 1 -- Base Course Materials Required Gradation							
Item No.	304.1	304.2	304.3	304.33	304.4	304.5	304.6
Item	Sand	Gravel	Crushed Gravel	Crushed Aggregate For Shoulders	Crushed Stone (Fine)	Crushed Stone (Coarse)	Crushed Stone (Very Coarse)
Sieve Size	Percent Passing By Weight						
6 in. (150 mm)	100	100	---	---	---	---	100
5 in (125 mm)	---	---	---	---	---	---	---
4 in (100 mm)	---	---	---	---	---	---	---
3 ½ in. (90 mm)	---	---	---	---	---	100	---
3 in. (75 mm)	---	---	100	---	---	85 – 100	60-90
2 ½ in. (63.5 mm)	---	---	---	---	---	---	---
2 in. (50 mm)	---	---	95 – 100	---	100	---	---
1 ½ in. (37.5 mm)	---	---	---	100	85 – 100	60 – 90	45-75
1 in (25.0 mm)	---	---	55 – 85	90 – 100	---	---	---
¾ in. (19.0 mm)	---	---	---	---	45 – 75	40 – 70	35-65
#4 (4.75 mm)	70 – 100	25 – 70	27 – 52	30 – 65	10 – 45	15 – 40	15-40
# 200 (0.075 mm) (In Sand Portion)*	0 – 12	0 – 12	0 – 12	---	---	---	---
# 200 (0.075 mm) (In Total Sample)	---	---	---	0 – 10	0 – 5	0 – 5	0-5

* Fraction passing the # 4 (4.75 mm) sieve

2.11 Crushed stone base course (coarse gradation). Acceptable sand may be blended as necessary to obtain the proper gradation for the fine aggregate portion.

2.11.1 The substitution of crushed stone meeting the requirements of crushed stone base course (fine gradation) for all or part of this item will be permitted.

Construction Requirements

3.1 General.

3.1.1 Upon approval, base course materials found within the project limits may be used under the specific item in accordance with 104.04.

3.1.2 Gravel or approved substitution for gravel may be substituted for any sand course. Crushed gravel may be substituted for gravel. Substitutions must be made across the entire section and will not be allowed for short or discontinuous segments.

3.1.3 Crushed stone (fine gradation) may be substituted for crushed gravel provided there is a minimum of 1 ft (0.3 m) of free draining material (sand, gravel, crushed stone coarse, or crushed stone very coarse) below the crushed stone. The substitution must be made across the entire section and will not be allowed for short or discontinuous segments.

3.1.3.1 Also, permission may be granted to use reclaimed stabilized base in lieu of crushed gravel or crushed stone (fine gradation) provided the following requirements are met:

SECTION 304

- (a) The material shall meet the requirements of 306.
- (b) The approved material shall be applied across the entire cross-section at a constant depth. Short or discontinuous sections as determined by the Engineer will not be allowed.
- (c) Transitions between reclaimed asphalt and crushed gravel or crushed stone (fine gradation) shall be made using a 50 ft (15 m) taper.
- (d) Reclaimed asphaltic material shall be placed directly under the proposed pavement.

3.1.3.2 Also, permission may be granted to use reclaimed asphalt pavement blended with granular material meeting the requirements of 304 in lieu of crushed gravel or crushed stone base course (fine gradation) providing that the following requirements are met:

- (a) The material shall meet the gradation requirements of the material being replaced.
- (b) The approved material shall be applied across the entire cross-section at a constant depth. Short or discontinuous sections as determined by the Engineer will not be allowed.
- (c) Transitions between reclaimed asphalt and crushed gravel or crushed stone (fine gradation) shall be made using a 50 ft (15 m) taper.
- (d) This material shall be placed directly under the proposed pavement.

3.1.3.3 Crushed stone (coarse or very coarse) may be substituted for gravel provided that all crushed gravel above the crushed stone is replaced with a combination of crushed stone coarse and fine with the top layer consisting of a minimum of six in. of crushed stone fine. The substitution must be made across the entire section and will not be allowed for short or discontinuous segments.

3.1.4 Crushed aggregate base course materials shall be produced and placed in their final location with as little segregation as possible.

3.1.5 Excess reclaimed stabilized base material substantially meeting the requirements of 2.7 may be substituted for the crushed aggregate for shoulders in 2.6. Reclaimed stabilized base material shall be mixed with loam as specified in 2.6.

3.1.5.1 Reclaimed stabilized base material shall not be substituted for crushed aggregate for shoulders in areas contiguous to residences and other existing landscaped areas where the growth of grass is desired.

3.2 Aggregate Crushing Plant.

3.2.1 The equipment for producing crushed gravel shall be of adequate size and with sufficient adjustments to produce the required materials without unnecessary waste. The plant shall be capable of removing excess fines.

3.2.2 The equipment for producing crushed stone shall consist of sufficient units with sufficient adjustments to produce the required material. The plant shall be capable of removing undesirable material and excess fines. In order to meet the required gradation, the Contractor may produce acceptable material in one operation or combine coarse and fine piles through a proportioning hopper to create a combined stockpile.

3.2.3 Glass Cullet Crushing Plant

3.2.3.1 The glass cullet crushing plant shall be capable of producing a product meeting the gradation requirements of AASHTO M 318.

3.2.3.2 Glass cullet shall be thoroughly mixed with other base course materials to produce a homogeneous blend prior to being placed on the roadway. In-place field blending of glass cullet with other base course materials will not be permitted, unless otherwise permitted.

3.3 Stockpile Construction.

3.3.1 All crushed aggregate base course materials shall be stockpiled. The Contractor shall give the Engineer advance notification of when the manufacturing and stockpiling are to begin.

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3.3.2 A stockpile of acceptable material, as described in 3.5, equal to at least 20 percent of the bid quantity or 5,000 yd³ (4000 m³), whichever is less, shall be constructed before the hauling and placing phase of the work begins. The stockpile shall be maintained until approximately 80 percent of the quantity has been placed.

3.3.3 Stockpiles shall be constructed in layers that minimize segregation. The desired optimum thickness of layers is 6 ft (1.8 m) and in no instance shall the layer be more than 10 ft. (3 m). Each layer shall be completed before the next layer is started. Construction of stockpiles by direct use of a fixed conveyor belt system or by dumping over a bank will not be permitted.

3.4 Placing.

3.4.1 The subgrade or preceding course shall be shaped to the specified crown and grade and maintained in a smooth condition free of holes and ruts. If the hauling equipment causes ruts in the subgrade or previously placed base course, the equipment shall be operated only on the course being placed, behind the spreading equipment.

3.4.2 Care shall be taken to avoid segregation during placement. Base course material shall be dumped on the course being placed and spread at once onto the previously placed layer. If spreading equipment is not available, dumping will not be permitted. Any segregation that occurs shall be remedied or the materials removed and replaced at no additional cost to the Department.

3.4.3 The Contractor's method of operation shall be such that oversized stones will not be delivered to the project.

3.4.4 When the base course is to be surface-treated and no pavement is to be placed upon it, stones having any dimension greater than 3 in. (75 mm) shall be removed from the upper 4 in. (100 mm) of the top layer.

3.4.5 Prior to fine grading, hard spots in the surface of the top layer shall be eliminated by scarifying the top 4 in. (100 mm).

3.4.6 Crushed gravel for shoulder leveling shall be spread uniformly along the area adjoining the edge of the pavement. The material shall be spread along both sides and under guardrail where there is no curb.

3.4.6.1 Reclaimed stabilized base material utilized in shoulders greater than 1½", in any direction, shall not be exposed after placement.

3.4.7 To prevent segregation of crushed aggregate during spreading and to assist in obtaining the required density of the mixture, water may be added to the crushed aggregate prior to performing the grading operations. The course shall be maintained in the moist condition during grading operations.

3.4.8 Crushed aggregate shall be hauled from an approved stockpile. Material obtained directly from a conveyor shall not be placed on the roadway without first stockpiling.

3.4.9 The base course material shall be spread in the amount necessary for proper consolidation and shall be shaped true to grade and cross-section by means of power graders or other approved equipment.

3.4.10 Surface voids in crushed stone base course (fine gradation) shall be eliminated by the addition of filler material to just fill the voids. Any surplus filler material shall be removed. The finished surface shall be uniform, true to grade, and free from segregation. The Contractor shall furnish and place filler material to correct any visible segregation prior to paving. The filler material shall be spread, scarified, if required, into the course, and recompact to the required density. Filler material shall meet the gradation requirements of sand. The final gradation of crushed stone base course (fine gradation) shall meet the requirements of Table 1.

3.5 Testing For Gradation.

3.5.1 Sampling procedure shall conform to AASHTO T 2. Testing procedures shall be in accordance with AASHTO T 27.

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3.5.1.1 When reclaimed asphalt pavement is blended with granular material to be used in lieu of crushed gravel or crushed stone base course (fine gradation) the method used to determine the amount of coarse material shall be determined according to NHDOT S-1.

3.5.2 The amount of material finer than the No. 200 (0.075 mm) sieve shall be determined according to AASHTO T 11, which specifies dry sieving after washing.

3.5.2.1 When reclaimed asphalt pavement is blended with granular material to be used in lieu of crushed gravel or crushed stone base course (fine gradation) the method used to determine the amount of material finer than the No. 200 (0.075 mm) sieve shall be determined according to NHDOT S-1.

3.5.3 For a preliminary determination of compliance with the specification for gradation, samples of sand and gravel may be taken from the pit, and samples of crushed gravel and crushed aggregate may be taken from the stockpile or from the final phase of the crushing operation. Materials not meeting the gradation requirements shall not be placed on the roadway.

3.5.4 Samples for acceptance testing of the material in place will be taken from each lift. Sampling for acceptance testing will not be done until the material has been graded and compacted.

3.5.5 Previously tested and accepted material contaminated by earthen, organic, or other foreign matter or degraded by hauling equipment to such an extent that the material no longer meets the gradation requirements shall be removed and replaced or otherwise made acceptable at the Contractor's expense.

3.6 Compaction.

3.6.1 Unless shown on the plans or ordered otherwise, the compacted depth of sand courses shall not exceed 12 in. (300 mm). The compacted depth of any layer of gravel, crushed gravel, or crushed stone placed shall not exceed 8 in. (200 mm).

3.6.2 Compaction of base course material shall be done with a method and adequate water to meet the requirements of 3.7. Rolling and shaping shall continue until the required density is attained.

3.6.3 Rolling and shaping patterns shall begin on the lower side and progress to the higher side of the course while lapping the roller passes parallel to the centerline. Rolling and shaping shall continue until each layer conforms to the required grade and cross-section and the surface is smooth and uniform.

3.6.4 Water shall be uniformly applied over the base course materials during compaction in the amount necessary for proper consolidation.

3.6.5 When vibratory equipment is being operated, the amplitude of vibrations, the compaction process shall be adjusted as necessary to avoid causing damage or vibration complaints to adjacent buildings and property.

3.6.6 Except at inaccessible locations, such as near guardrail, material used for shoulder leveling shall be set with a pneumatic-tired roller.

3.7 Density Testing.

3.7.1 The density of sand courses shall be determined by AASHTO T 191 (Sand-Cone Method), AASHTO T 204 (Drive Cylinder Method), or AASHTO T 238 (Nuclear Methods). The density shall not be less than 95 percent of the maximum density determined in accordance with AASHTO T 99 (Standard Proctor Test) or a control strip. (See 3.8.)

3.7.2 The density of gravel and crushed gravel courses shall be determined by AASHTO T 191 (Sand-Cone Method) or AASHTO T 238 (Nuclear Methods). The density of crushed stone base courses shall be determined by AASHTO T 238 (Nuclear Methods). The density shall not be less than 95 percent of the maximum density as determined by AASHTO T 99 (Standard Proctor Test) or a control strip. (See 3.8.)

3.8 Control Strip Procedure.

3.8.1 At the beginning of the compaction operation a control strip of at least 100 linear ft (30 m) in length and spanning the width of the section being placed shall be constructed. The density requirement shall be determined by compacting the control strip at a suitable moisture content until no further increase in density can be measured. The remainder of the course shall be compacted to a density not less than 95 percent of the maximum control strip density, as measured by the nuclear density testing equipment. A new control strip will be required when there is a significant change in the gradation of the

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material being placed or a change in compaction equipment. Compaction of the control strip shall be done with approved vibratory rollers or compactors capable of producing a dynamic force of at least 27,000 lb (120 kN).

3.8.2 Crushed gravel for roundabout truck apron curb shall be compacted to a density not less than 98 percent of the maximum control strip density, as measured by the nuclear density testing equipment.

3.9 Winter Construction.

3.9.1 Base course materials shall not be placed on or above frozen material if the depth from the top of the contemplated course to the bottom of the frozen material exceeds 2-1/2 ft (750 mm).

3.9.2 If the density requirements are not attained for any layer before the material freezes, no further material shall be placed on that layer.

3.10 Maintenance of Traffic. Glass cullet base course blends shall be capped with standard specification base course materials before the traveling public is allowed to drive over the material.

Method of Measurement

4.1 Roadbed base course materials of sand, gravel, crushed gravel, crushed aggregate for shoulders, crushed stone (fine gradation), and crushed stone (coarse gradation) will not be measured, but shall be the cubic yard (cubic meter) final pay quantity in accordance with 109.11 of compacted material required within the lines shown on the plans.

4.2 Applicable provisions as stated in 106.02 shall apply to base course materials.

4.3 Crushed gravel for shoulder leveling will be measured by the ton (metric ton) in accordance with 109.01.

4.3.1 Reclaimed stabilized base material used for crushed gravel for shoulder leveling shall be measured by the cubic yard using average lengths, widths and depths of the area to be filled or as provided in 4.3 as determined by the Engineer.

4.4 Gravel and crushed gravel for drives will be measured by the cubic yard (cubic meter) of compacted materials placed within the limits shown on the plans.

Basis of Payment

5.1 Roadbed base course materials of sand, gravel, crushed gravel, crushed aggregate for shoulders, crushed stone (fine gradation), and crushed stone (coarse gradation) are final pay quantities and will be paid for at the Contract unit price per cubic yard (cubic meter) in accordance with 109.11.

5.1.1 Reclaimed stabilized base authorized for use in lieu of crushed gravel or crushed stone (fine gradation) will be paid for as provided in 5.1

5.2 Filler material used to eliminate voids in crushed stone base course (fine gradation) will be subsidiary.

5.3 The accepted quantity of gravel or crushed gravel for drives will be paid for at the Contract unit price per cubic yard (cubic meter) complete in place. The accepted quantity of crushed gravel for shoulder leveling will be paid for at the Contract unit price per ton (metric ton) delivered and used on the project.

Pay items and units:

304.1	Sand (F)	Cubic Yard (Cubic Meter)
304.2	Gravel (F)	Cubic Yard (Cubic Meter)
304.25	Gravel for Drives	Cubic Yard (Cubic Meter)
304.3	Crushed Gravel (F)	Cubic Yard (Cubic Meter)
304.32	Crushed Gravel for Shoulder Leveling	Ton (Metric Ton)
304.33	Crushed Aggregate for Shoulders (F)	Cubic Yard (Cubic Meter)
304.35	Crushed Gravel for Drives	Cubic Yard (Cubic Meter)
304.4	Crushed Stone (Fine Gradation) (F)	Cubic Yard (Cubic Meter)
304.5	Crushed Stone (Coarse Gradation) (F)	Cubic Yard (Cubic Meter)
304.6	Crushed Stone (Very Coarse)	Cubic Yard (Cubic Meter)