Final Report: Appendix B. Recommended Revisions to Lakeville Zoning code and Subdivision Rules and Regulations

Horsley Witten Group, Inc.

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APPENDIX B.  RECOMMENDED REVISIONS TO LAKEVILLE ZONING CODE AND SUBDIVISION RULES AND REGULATIONS
MEMORANDUM

TO: Lakeville Zoning Steering Committee
FROM: Nathan Kelly, Senior Planner, Horsley Witten Group, Inc.
DATE: September 23, 2010
RE: Proposed Zoning Ordinance Revisions, Town of Lakeville

The Horsley Witten Group (HW), as part of Phase 2 of Taunton River Watershed Management Plan, has developed the following recommendations for revisions to the Town of Lakeville’s Zoning Bylaw and regulations, to improve the water resource protection and management in concert with the conclusions of Phase 1 of the watershed management plan (www.horsleywitten.com/tauntonwatershed). In general, the Phase 1 report concluded that improved regulations were needed to promote low impact development (LID), and to improve wastewater and stormwater management in order to keep water local and recharge local water sources while improving water quality treatment. The specific zoning recommendations presented below are intended to address particular concerns identified by the Lakeville Zoning Steering Committee, which are:

1. Peer review of site plans by professional engineers;
2. Enforcement mechanisms for stormwater facilities;
3. Enhanced stormwater management techniques; and
4. Redevelopment permitting in lakeside housing developments.

HW has developed some recommended amendments for the following sections of the Town of Lakeville Zoning By-Laws:

- Section 6.7 Site Plan Review;
- Section 7.2 Water Resources Protection District; and
- Section 7.4.6 Specific Uses by Special Permit.

All recommendations presented below are numbered by the associated subsection in the Town of Lakeville Zoning By-Laws as appropriate. However, we have included in our recommendations below some renumbering of the sub-subsections for simplicity. The recommended text below is a combination of existing official text with our recommended changes already incorporated. Text highlighted in grey identifies commentary to the proposed amendments. A document identifying specific changes to the Zoning By-Laws text (in Microsoft Word, using the ‘track changes’ review tool) is also provided as an attachment, both in hard copy and electronically, for your use.

**SITE PLAN REVIEW**
6.7. SITE PLAN REVIEW

6.7.1. Purpose

The purpose of site plan review is to ensure that the design and layout of certain developments permitted as of right or by Special Permit will constitute suitable development and will not result in a detriment to the neighborhood or the environment. The site plan review shall consider the following:

1) Protection of adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against light, sight, sound, dust and vibration, and preservation of light and air;
2) Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas;
3) Adequacy of the methods for disposal of wastes; and
4) Protection of environmental features on the site and in adjacent areas.

6.7.2. Procedure - Business or Industrial

Applicants for a building permit for new construction or for modification of or addition to a business or industrial structure resulting in new or additional floor area of over 1,500 square feet in the aggregate shall submit six (6) copies of a site plan as described herein to the Town Clerk for Planning Board approval. Failure of the Planning Board to act within twenty-one (21) days of receipt of a site plan shall be deemed lack of opposition thereto.

The following information shall be required by the applicant for site plan review:

1) locus plan;
2) location of structures within 200 feet of property lines;
3) existing and proposed buildings, showing setbacks from property lines;
4) building elevations;
5) parking areas, driveways, and facilities for pedestrian movement including parking calculations based on current regulations;
6) utilities and lighting;
7) landscaping, including trees to be removed and retained;
8) loading and unloading facilities;
9) provisions for refuse removal;
10) drainage calculations and verification of soil types;
11) existing and projected traffic volumes from the site and effect on the local road network;
12) existing and proposed contour elevations in two (2) foot increments;
13) location of well or public drinking water supply infrastructure;
14) location of wetlands approved by the Conservation Commission;
15) proposed and existing location of signs;  
16) any building over 35,000 cubic feet should be accompanied by engineered plans drawn by a certified architect as required by the Massachusetts building code;

Commentary: Standard #16 may have been drafted incorrectly, but we would like to discuss with the Town. It sounds like the intent is to get interior plans for large buildings. There are two issues to potentially address here: 1) the standard for 35,000 cubic feet is small and we suspect that the intent was to use 35,000 square feet; and 2) it is not legal to try to regulate the interior of a building through a zoning process. A viable alternative to this standard may be: “Any building with over 35,000 square feet of gross floor area shall be shown with architectural elevations that include:

a. exterior material, including trim and colors;  
b. type, pitch and material of roofs;  
c. size, type, and spacing of windows, doors and other openings;  
d. size, location, and lighting of signs affixed to or hanging from the building; and  
e. the relationship of massing, scale and height to other existing structures in the immediate vicinity with photos and drawings.”

17) all information should pertain to existing and proposed;  
18) a Stormwater Management Plan consistent with Section 7.2 Water Resources Protection District;  
19) a Sediment and Erosion Control Plan consistent with Section 7.2 Water Resources Protection District;

Commentary: Information required for numbers 19 and 20 represent new informational requirements. Although the informational requirements are new, they are consistent with the performance standards in the existing by-law. In other words, this is the information the Planning Board requires to ensure compliance with standards that are in effect today.

20) other information as may be necessary to determine compliance with the provisions of this By-Law.

In addition, at least ten (10) days prior to filing a site plan with the Planning Board, an applicant shall submit one copy of the site plan to each of the following boards and officers, together with a request for review and recommendation to the Planning Board pursuant to this section:
1) Police Chief
2) Fire Chief
3) Board of Health
4) Conservation Commission
5) Highway Surveyor
6) Building Department
7) Open Space Committee
8) Board of Selectmen

Said boards and officers shall review the site plan, considering the effects of the proposed use and related construction, and shall make recommendations in writing as they deem appropriate to minimize any detrimental effects of the development on nearby property or on Town Roads or other infrastructure. Failure to make any recommendations to the Planning Board within twenty-one (21) days of receiving the application shall be deemed as lack of opposition thereto.

6.7.3. Procedure-Residential

Applicants for a building permit for new construction of or for modification or addition to any residential structure which will disturb more than 3,000 square feet of ground for which filing of a Notice of Intent with the Lakeville Conservation Commission is not required shall submit three (3) copies of a site plan as described herein the Town Clerk for Planning Board approval. Failure of the Planning Board to act within twenty-one (21) days of receipt of a site plan shall be deemed lack of opposition thereto.

The following information shall be required by the applicant for site plan review:

1) locus plan;
2) location of structures within 100 feet of property lines;
3) existing and proposed buildings, showing setbacks from property lines;
4) existing and proposed contour elevations in two (2) foot increments;
5) location of well or public drinking water supply including existing and/or proposed connections;
6) location of wetlands approved by the Conservation Commission;
7) a Stormwater Management Plan consistent with Section 7.2 Water Resources Protection District;
8) a Sediment and Erosion Control Plan consistent with Section 7.2 Water Resources Protection District;

Commentary: Information required for numbers 7 and 8 represent new informational requirements. Although the informational requirements are new, they are consistent with the performance standards in the existing by-law. In other words, this is the information the Planning Board requires to ensure compliance with standards that are in effect today.
9) other information as may be necessary to determine compliance with the provisions of this By-Law.

In addition, at least ten (10) days prior to filing a site plan with the Planning Board, an applicant shall submit one copy of the site plan to each of the following boards and officers, together with a request for review and recommendation to the Planning Board pursuant to this section:

1) Police Chief
2) Fire Chief
3) Board of Health
4) Conservation Commission
5) Highway Surveyor
6) Building Department
7) Open Space Committee
8) Board of Selectmen

Said boards and officers shall review the site plan, considering the effects of the purposed use and related construction, and shall make recommendations as they deem appropriate to minimize any detrimental effects of the development on nearby property or on Town Roads or other infrastructure. Failure to make any recommendations to the Planning Board within twenty-one (21) days of receiving the application shall be deemed as lack of opposition thereto.

6.7.4. Peer Review

The applicant may be required to pay for reasonable consulting fees to provide peer review of the Site Plan application, pursuant to G.L. Chapter 44, Section 53G. Such fees shall be held by the Town in a separate account and used only for expenses associated with the review of the application by outside consultants, including by not limited to attorneys, engineers, urban designers, housing consultants, planners, and others. Any surplus remaining after the completion of such review shall be returned to the applicant.

6.7.5 Decision

Final action of the Planning Board shall consist of one of the following:

1) Approval as Submitted: Approval based on a determination that the application complies with the criteria and design performance standards set forth in this section.
2) Approval with Conditions: Approval of the application subject to any reasonable conditions, modifications, and restrictions the Planning Board may deem necessary to ensure the health, safety, and general welfare of the community.
3) Disapproval: A disapproval of the application for the reasons of violations of provisions in the Zoning By-law, or determination that the site plan(s), although proper in form, is so intrusive on the interests of the public in one or more aspects regulated by the Zoning By-law, that no reasonable terms or conditions can be devised to adequately protect the interests of the public.

6.7.6 Appeals

Appeal of the Planning Board’s final action on a site plan review application shall be made to the Zoning Board of Appeals. The Zoning Board of Appeals shall uphold, overturn, or remand the matter to the Planning Board for reconsideration, as applicable.

WATER RESOURCE PROTECTION DISTRICT

7.2. Water Resource Protection District (WRPD) Regulations

7.2.1. Purpose and Application

For the purpose of protecting groundwater and other water resources in the Town, there are hereby established water resource protection regulations as part of the Zoning By-Law.

7.2.2. Scope of Authority

This overlay district shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Uses prohibited in the underlying zoning districts shall be prohibited in the WRPD. These regulations apply throughout the Town.

All uses and dimensional requirements and other provisions of this by-law applicable to land, buildings, and uses in underlying zoning districts shall remain in force and effect, except that where the water resources protection regulations impose greater or additional restrictions and requirements, such restrictions and requirements shall prevail.

7.2.3. Use Regulations

1) Prohibited Uses and Activities

Notwithstanding use regulations for a particular district, the uses listed below are prohibited. Such uses where lawfully existing, may be continued, but may not be expanded or altered without a Special Permit from the Special Permit Granting Authority (SPGA) which for the purpose of this section of the Zoning By-Law is the Planning Board.

a. Outdoor storage of the following substances: salt, snow-melting chemicals, or hazardous substances such as pesticides, herbicides, and water soluble and
volatile chemical compounds. This prohibition shall include, without limitation, outdoor storage of materials containing or coated with such chemicals susceptible to being carried into surface or groundwater (Adopted May 10, 1982).

b. Disposal, use as fill in layers or in bulk, or stockpiling of any demolition materials, waste or residue typically known as sludge, waste sludge, fly ash, or any other substance that contains hazardous chemicals or other compounds that are hazardous (Adopted Special Town Meeting Jun 11, 2001, approved by Attorney General September 19, 2001).

2) Special Permit

In addition to Section 4.1 Table of Use Regulations, the following uses shall require a Special Permit.

a. Conversion of seasonal home or non-residential building for year-round residence.

7.2.4. Performance and Design Standards for Site Plan Review Activities

Where an activity lies within the WRPD and requires Site Plan Review pursuant to Section 6.7 of the Zoning By-law, the following standards shall apply.

Commentary: In general, the purpose of this section is to move the standards for erosion and sediment control and stormwater management out of the Site Plan Review section and under the WRPD. This is more consistent with the way the courts perceive the purpose of an overlay district (to set standards) and the purpose of Site Plan Review (to provide information).

1) Sediment and Erosion Control – At a minimum the Sediment and Erosion Control Plan shall comply with the performance standards of the most recent version of the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials, dated March 1997 as amended, detailing the location, installation and maintenance of sediment and erosion controls during and after construction.

2) Stormwater Management Criteria – At a minimum the Stormwater Management Plan shall comply with the performance standards of the most recent version of Massachusetts Stormwater Management Standards (MASWMS). Consistent with MASWMS The following general performance criteria shall be applicable to all Stormwater Management Plans:

a. No Untreated Discharges – All land development and land use conversion activities shall not discharge untreated stormwater runoff directly to a
wetland, local water body, municipal drainage system, or abutting property, without treatment.

b. The use of Low Impact Development (LID) measures, as identified in the MASWMS and as allowable through local regulation, is required to the maximum extent practicable for new development in order to promote recharge, reduce runoff volumes, and minimize reliance on structural stormwater management measures. The Site Design Criteria require that the site planning process shall be documented and shall include the following steps:

i. Identify critical environmental resources;
ii. Delineate potential building envelopes avoiding environmental resource areas and providing a buffer from regulated resources of at least twenty-five (25) feet; and
iii. Develop methods to minimize impervious surfaces and document percent of impervious surfaces proposed on-site.

c. Annual groundwater recharge rates should be maintained by promoting infiltration through the use of structural and non-structural methods. At a minimum, annual recharge from the post development site shall approximate the annual recharge from pre-development site conditions.

d. Redevelopment projects shall, to the maximum extent practicable, improve existing hydrological conditions, as specified in the MASWMS.

e. Prior to the start of land disturbance or construction activity, the Town shall require a surety bond irrevocable letter of credit, cash, or other acceptable security, when deemed appropriate. The form of the surety shall be approved by the Town Treasurer, and be in an amount deemed sufficient by the Planning Board to ensure that the work will be completed in accordance with these regulations. The bond shall be released after demonstration of the following:

i. Adequate construction inspection;
ii. 1 year after acceptance of construction the applicant shall submit a final inspection;
iii. upon adequate inspection and acceptance of road, surety bond is released.

7.2.5. Performance and Design Standards for Special Permit Activities

1) Onsite Septic Systems – Onsite septic systems must be in full compliance with 310 CMR 15.000 and, where local regulations may be more stringent, compliance is required with those provisions.
2) Where lots are to be serviced by on-site drinking water wells and on-site septic systems:

   a. Wastewater flow rates shall not exceed three hundred thirty (330) gallons per day for every forty thousand (40,000) square feet of land on the site. Where nitrogen reducing technology is used for the on-site septic system, design flow calculations shall not exceed four hundred forty (440) gallons per day for every forty thousand (40,000) square feet of land. All nitrogen reducing technology must be approved by Massachusetts Department of Environmental Protection for General Use, as identified in the ‘Summary of Innovative/Alternative Technologies Approved for Use in Massachusetts and Under Review.’

   **Commentary:** The Town wished to develop stronger, defensible Zoning Standards to help protect surface waters, particularly the conversion or expansion of housing in the older cottage communities. The standard above helps to limit the scale of development by limiting the volume of wastewater flow in a manner similar, but stricter, than Title 5.

3) Where activities take place within a Zone C contributing area as defined by DEP, the following standards shall apply:

   a. The horizontal distance from the pond to the leaching field added to the vertical distance of the leaching field to the seasonal high ground water level shall exceed two hundred (200) feet where feasible. Where this level of separation is not feasible due to the location of existing structures or the proximity of a lot to surface water resources, the applicant shall site the leach field as far from the surface water resource as possible. Repair or replacement of failed septic systems that do not include an increase in design flow shall be exempt from this requirement.

   **Commentary:** This standard is designed to mitigate phosphorus loading to fresh water bodies in the Town. Phosphorus binds to soil particles as it is released from septic leach fields so requiring increased separation where possible is an effective way to keep this nutrient from ponds and lakes. This particular standard has been accepted by DEP’s Groundwater Discharge Permit program.

   b. The orientation of the leaching trenches shall be perpendicular to the direction of groundwater flow to maximize phosphorus retention. For the purposes of this ordinance, the direction of groundwater flow is presumed to be perpendicular to the edge of the nearest surface water resource unless an applicant demonstrates that the flow direction is different through the use of groundwater elevations recorded using at least three on-site wells.
Commentary: This standard is also designed to mitigate phosphorus loading to ponds and lakes in the community. By orienting the leach field perpendicular to groundwater flow, the exposure of phosphorus to soils particles is maximized and therefore increases the rate of phosphorus adsorption.

SECTION 7.4.6 SPECIFIC USES BY SPECIAL PERMIT

Conversion of seasonal home or non-residential building for year-round residence
SPGA - Board of Appeals; Residential, Business Districts

Subject to Board of Health approval, the applicant must demonstrate compliance with the State Environmental Code, Title 5.

In addition to the requirements listed in Section 7.4.2 of the Zoning By-law, the applicant shall provide a septic system design plan for the existing or proposed system that includes:

- Separation from seasonal high groundwater;
- Orientation of septic leach field to groundwater flow;
- Calculation of combined horizontal and vertical distance of leach field to seasonal high water mark of surface water body;
- Setback to onsite and adjacent drinking water wells;
- Approximate location of wastewater facilities on adjacent properties; and
- Proposed grading (2 ft contours).
6.7.1 Purpose

The purpose of site plan review is to ensure that the design and layout of certain developments permitted as of right or by Special Permit will constitute suitable development and will not result in a detriment to the neighborhood or the environment.

The site plan review shall consider the following:

1) Protection of adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against light, sight, sound, dust and vibration, and preservation of light and air;

2) Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas;

3) Adequacy of the methods for disposal of wastes; and

4) Protection of environmental features on the site and in adjacent areas.

6.7.1.5 Management of stormwater runoff to minimize stormwater runoff, maximize infiltration and recharge where possible and minimize pollutants in the runoff as required to meet the performance standards of the Massachusetts Department of Environmental Protection’s March 1997 Stormwater Management Policy as amended;

6.7.1.6 Minimization of on-site erosion and the prevention of eroded soil from being deposited onto adjacent properties, rights-of-way, the municipal storm drainage system, wetlands or water courses during and after construction.

6.7.2 Procedure Business or Industrial

Applicants for a building permit for new construction or for modification of or addition to a business or industrial structure resulting in new or additional floor area of over 1,500 square feet in the aggregate shall submit six (6) copies of a site plan as described herein to the Town Clerk for Planning Board approval. Failure of the Planning Board to act within twenty-one (21) days of receipt of a site plan shall be deemed lack of opposition thereto.

The following information shall be required by the applicant for site plan review:

1) Locus plan;

2) Location of structures within 200 feet of property lines;
3) existing and proposed buildings, showing setbacks from property lines;
4) building elevations;
5) parking areas, driveways, and facilities for pedestrian movement including parking calculations based on current regulations;
6) drainage system;
7) utilities and lighting;
8) loading and unloading facilities;
9) provisions for refuse removal; drainage calculations and verification of soil types;
10) existing and projected traffic volumes from the site and effect on the local road network;
11) existing and proposed contour elevations in two (2) five (5) foot increments;
12) location of well or public drinking water supply infrastructure;
13) location of wetlands approved by the Conservation Commission;
14) proposed and existing location of signs;
15) any building over 35,000 cubic feet should be accompanied by engineered plans drawn by a certified architect as required by the Massachusetts building code;
16) all information should pertain to existing and proposed;
17) a Stormwater Management Plan consistent with Section 7.2 Water Resources Protection District;
18) Sediment and Erosion Control Plan consistent with Section 7.2 Water Resources Protection District, detailing the location, installation and maintenance of sediment and erosion...
controls during and after construction. The Plan shall adhere to the standards and specifications found in the Massachusetts Erosion and Sediment Control Guidelines dated March 1997 as amended.

20.2(2) Other information as may be necessary to determine compliance with the provisions of this By-Law.

In addition, at least ten (10) days prior to filing a site plan with the Planning Board, an applicant shall submit one copy of the site plan to each of the following boards and officers, together with a request for review and recommendation to the Planning Board pursuant to this section:

1. Police Chief
2. Fire Chief
3. Board of Health
4. Conservation Commission
5. Highway Surveyor
6. Building Department
7. Open Space Committee
8. Board of Selectmen

Said boards and officers shall review the site plan, considering the effects of the proposed use and related construction, and shall make recommendations in writing as they deem appropriate to minimize any detrimental effects of the development on nearby property or on Town Roads or other infrastructure. Failure to make any recommendations to the Planning Board within twenty-one (21) days of receiving the application shall be deemed as lack of opposition thereto.

(Adopted at Special Town Meeting June 11, 2001, approved by Attorney General September 10, 2001)

6.7.3 Procedure-Residential

Applicants for a building permit for new construction of or for modification or addition to any residential structure which will disturb more than 3,000 square feet of ground for which filing of a Notice of Intent with the Lakeville Conservation Commission is not required shall submit three (3) copies of a site plan as described herein the Town Clerk for Planning Board approval. Failure of the Planning Board to act within twenty-one (21) days of receipt of a site plan shall be deemed lack of opposition thereto.

The following information shall be required by the applicant for site plan review:

1. 1) Locus plan;
2. 2) Location of structures within 100 feet of property lines;
3) existing and proposed buildings, showing setbacks from property lines;
4) existing and proposed contour elevations in two (2) foot increments;
5) location of well or public drinking water supply including existing and/or proposed connections;
6) location of wetlands approved by the Conservation Commission;
7) a Stormwater Management Plan consistent with Section 7.2 Water Resources Protection District;
8) a Sediment and Erosion Control Plan consistent with Section 7.2 Water Resources Protection District;

7) all information should pertain to existing and proposed;
8) Stormwater Management Plan detailing the Best Management Practices that will be employed at the site such that stormwater runoff shall meet the performance standard found in the most current version of the Massachusetts Department of Environmental Protection’s Stormwater Management Policy;
9) Sediment and Erosion Control Plan detailing the location, installation and maintenance of sediment and erosion controls during and after construction. The Plan shall adhere to the standards and specifications found in the Massachusetts Erosion and Sediment Control Guidelines dated March 1997 as amended;
10) other information as may be necessary to determine compliance with the provisions of this By-Law.

In addition, at least ten (10) days prior to filing a site plan with the Planning Board, an applicant shall submit one copy of the site plan to each of the following boards and officers, together with a request for review and recommendation to the Planning Board pursuant to this section:

1) Police Chief
2) Fire Chief
3) Board of Health

Building Department
4) Conservation Commission
5) Highway Surveyor
6) Building Department
7) Open Space Committee
8) Board of Selectmen

Said boards and officers shall review the site plan, considering the effects of the proposed use and related construction, and shall make recommendations as they deem appropriate to minimize any detrimental effects of the development on nearby property or on Town Roads or other infrastructure. Failure to make any recommendations to the Planning Board within twenty-one (21) days of receiving the application shall be deemed as lack of opposition thereto.

6.7.4. Peer Review
The applicant may be required to pay for reasonable consulting fees to provide peer review of the Site Plan application, pursuant to G.L. Chapter 44, Section 53G. Such fees shall be held by the Town in a separate account and used only for expenses associated with the review of the application by outside consultants, including by not limited to attorneys, engineers, urban designers, housing consultants, planners, and others. Any surplus remaining after the completion of such review shall be returned to the applicant.

6.7.5 Decision

Final action of the Planning Board shall consist of one of the following:

1) Approval as Submitted: Approval based on a determination that the application complies with the criteria and design performance standards set forth in this section.

2) Approval with Conditions: Approval of the application subject to any reasonable conditions, modifications, and restrictions the Planning Board may deem necessary to ensure the health, safety, and general welfare of the community.

3) Disapproval: A disapproval of the application for the reasons of violations of provisions in the Zoning By-law, or determination that the site plan(s), although proper in form, is so intrusive on the interests of the public in one or more aspects regulated by the Zoning By-law, that no reasonable terms or conditions can be devised to adequately protect the interests of the public.

6.7.6 Appeals

Appeal of the Planning Board’s final action on a site plan review application shall be made to the Zoning Board of Appeals. The Zoning Board of Appeals shall uphold, overturn, or remand the matter to the Planning Board for reconsideration, as applicable.
7.2.7.2 Water Resource Protection District (WRPD) Regulations

7.2.1. Purpose and Application

For the purpose of protecting groundwaters and other water resources in the Town, there are hereby established water resource protection regulations as part of the Zoning By-Law. These regulations apply throughout the Town.

7.2.2. Scope of Authority

This overlay district shall apply to all new construction, reconstruction, or expansion of existing buildings and new or expanded uses. Uses prohibited in the underlying zoning districts shall be prohibited in the WRPD. These regulations apply throughout the Town.

All uses and dimensional requirements and other provisions of this by-law applicable to land, buildings, and uses in underlying zoning districts shall remain in force and effect, except that where the water resources protection regulations impose greater or additional restrictions and requirements, such restrictions and requirements shall prevail.

7.2.3. Use Regulations

1) Prohibited Uses and Activities

Notwithstanding use regulations for a particular district, the uses listed below are prohibited. Such uses where lawfully existing, may be continued, but may not be expanded or altered without a Special Permit from the Special Permit Granting Authority (SPGA) which for the purpose of this section of the Zoning By-Law is the Planning Board.

   a. 7.2.2.1 Outdoor storage of the following substances: salt, snow-melting chemicals, or hazardous substances such as pesticides, herbicides, and water soluble and volatile chemical compounds. This prohibition shall include, without limitation, outdoor storage of materials containing or coated with such chemicals susceptible to being carried into surface or groundwaters (Adopted May 10, 1982).

   b. Disposal, use as fill in layers or in bulk, or stockpiling of any demolition materials, waste or residue typically known as sludge, waste sludge, fly ash, or any other substance that contains hazardous chemicals or other compounds that are hazardous (Adopted Special Town Meeting Jun 11, 2001, approved by Attorney General September 19, 2001).

   (Adopted Special Town Meeting June 11, 2001, approved by Attorney General September 19, 2001)
2) **7.4.6 Specific Uses by Special Permit**

In addition to Section 4.1 Table of Use Regulations, the following uses shall require a Special Permit.

a. Conversion of seasonal home or non-residential building for year-round residence.

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### 7.2.4 Performance and Design Standards for Site Plan Review Activities

Where an activity lies within the WRPD and requires Site Plan Review pursuant to Section 6.7 of the Zoning By-law, the following standards shall apply.

1) **Sediment and Erosion Control** – At a minimum the Sediment and Erosion Control Plan shall comply with the performance standards of the most recent version of the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials, dated March 1997 as amended, detailing the location, installation and maintenance of sediment and erosion controls during and after construction.

2) **Stormwater Management Criteria** – At a minimum the Stormwater Management Plan shall comply with the performance standards of the most recent version of Massachusetts Stormwater Management Standards (MASWMS). Consistent with MASWMS The following general performance criteria shall be applicable to all Stormwater Management Plans:

a. **No Untreated Discharges** – All stormwater runoff generated from land development and land use conversion activities shall not discharge untreated stormwater runoff directly to a wetland, local water body, municipal drainage system, or abutting property, without adequate treatment.

b. **The use of Low Impact Development (LID) measures**, as identified in the MASWMS and as allowable through local regulation, is required to the maximum extent practicable for new development in order to promote recharge, reduce runoff volumes, and minimize reliance on structural stormwater management measures. The Site Design Criteria require that the site planning process shall be documented and shall include the following steps:

   i. ID critical environmental resources;
   ii. Delineate potential building envelopes avoiding environmental resource areas and providing a buffer from regulated resources of at least twenty-five (25) feet; and
   iii. Develop methods to minimize impervious surfaces and document percent of impervious surfaces proposed on-site.
c. Annual groundwater recharge rates should be maintained by promoting infiltration through the use of structural and non-structural methods. At a minimum, annual recharge from the post development site shall approximate the annual recharge from pre-development site conditions.

d. Redevelopment projects shall, at a minimum, reduce the total impervious cover by forty percent (40%) from existing conditions. Where site conditions prevent a reduction in impervious cover, the applicant shall implement stormwater controls for at least forty percent (40%) of the site’s impervious cover; or implement a combination of impervious cover reduction and area treated with stormwater controls that shall equal or exceed forty percent (40%) of the site’s impervious cover.

e. Prior to the start of land disturbance or construction activity, the Town shall require a surety bond irrevocable letter of credit, cash, or other acceptable security, when deemed appropriate. The form of the surety shall be approved by the Town Treasurer, and be in an amount deemed sufficient by the Planning Board to ensure that the work will be completed in accordance with these regulations. The bond shall be released after demonstration of the following:

   i. Adequate construction inspection;
   ii. 1 year after acceptance of construction the applicant shall submit a final inspection;
   iii. upon adequate inspection and acceptance of road, surety bond is released.

7.2.5. Performance and Design Standards for Special Permit Activities

1) Onsite Septic Systems – Onsite septic systems must be in full compliance with 310 CMR 15.000 and, where local regulations may be more stringent, compliance is required with those provisions.

2) Where lots are to be serviced by on-site drinking water wells and on-site septic systems:

   a. Wastewater flow rates shall not exceed three hundred thirty (330) gallons per day for every forty thousand (40,000) square feet of land on the site. Where nitrogen reducing technology is used for the on-site septic system, design flow calculations shall not exceed four hundred forty (440) gallons per day for every forty thousand (40,000) square feet of land. All nitrogen reducing technology must be approved by Massachusetts Department of Environmental Protection for General Use, as identified in the ‘Summary of Innovative/Alternative Technologies Approved for Use in Massachusetts and Under Review.’
3) Where activities take place within a Zone C contributing area as defined by DEP, the following standards shall apply:

a. The horizontal distance from the pond to the leaching field added to the vertical distance of the leaching field to the seasonal high ground water level shall exceed two hundred (200) feet where feasible. Where this level of separation is not feasible due to the location of existing structures or the proximity of a lot to surface water resources, the applicant shall site the leach field as far from the surface water resource as possible. Repair or replacement of failed septic systems that do not include an increase in design flow shall be exempt from this requirement.

b. The orientation of the leaching trenches shall be perpendicular to the direction of groundwater flow to maximize phosphorus retention. For the purposes of this ordinance, the direction of groundwater flow is presumed to be perpendicular to the edge of the nearest surface water resource unless an applicant demonstrates that the flow direction is different through the use of groundwater elevations recorded using at least three on-site wells.
Conversion of seasonal home or non-residential building for year-round residence
SPGA - Board of Appeals; Residential, Business Districts

Subject to Board of Health approval, the applicant must demonstrate compliance with the State Environmental Code, Title 5.

In addition to the requirements listed in Section 7.4.2 of the Zoning By-law, the applicant shall provide a septic system design plan for the existing or proposed system that includes:

- Separation from seasonal high groundwater;
- Orientation of septic leach field to groundwater flow;
- Calculation of combined horizontal and vertical distance of leach field to seasonal high water mark of surface water body;
- Setback to onsite and adjacent drinking water wells;
- Approximate location of wastewater facilities on adjacent properties; and
- Proposed grading (2 ft contours).

Subject to Board of Health approval, must demonstrate adequacy of water supply, sewage disposal, and indoor and outdoor space without overloading the capacity of land or endangering water quality. Lot size, as well as soils and topography, shall be considered, and engineering analysis may be required. Conditions and limitations may be imposed on the number of occupants and other use characteristics for the protection of the residents, the neighborhood and the environments.
(Adopted May 12, 1980)
MEMORANDUM

TO: Lakeville Zoning Steering Committee

FROM: Nathan Kelly, Senior Planner, Horsley Witten Group, Inc.

DATE: September 23, 2010

RE: Proposed Subdivision Rules and Regulations Revisions, Town of Lakeville

The Horsley Witten Group (HW), as part of Phase 2 of Taunton River Watershed Management Plan, has developed the following recommendations for revisions to the Town of Lakeville’s Subdivision Rules and Regulations. These recommendations have been developed jointly with recommended amendments to the Lakeville Zoning Bylaw and regulations, which are presented in a separate memorandum, also dated September 27, 2010. These recommendations were developed to improve the water resource protection and management in concert with the conclusions of Phase 1 of the watershed management plan (www.horsleywitten.com/tauntonwatershed). In general, the Phase 1 report concluded that improved regulations were needed to promote low impact development (LID), and to improve wastewater and stormwater management in order to keep water local and recharge local water sources while improving water quality treatment. The specific subdivision rules and regulations recommendations presented below are intended to improve the stormwater management techniques in subdivisions in Lakeville. This was one of four particular concerns identified by the Lakeville Zoning Steering Committee, which are:

1. Peer review of site plans by professional engineers;
2. Enforcement mechanisms for stormwater facilities;
3. Enhanced stormwater management techniques; and
4. Redevelopment permitting in lakeside housing developments.

HW has developed a number of recommended changes to the Town of Lakeville Planning Board Subdivision Rules and Regulations. These are described in summary below. A document identifying specific changes to the Subdivision Rules and Regulations text is also provided as an attachment, both in hard copy and electronically, for your use. In that document, text highlighted in grey represents suggested additions or deletions to the existing Subdivision Rules and Regulations. Text labeled “Commentary” that is also highlighted in grey identifies commentary to the proposed amendments.

SUMMARY OF RECOMMENDED AMENDMENTS

A number of recommended revisions and additions to the Subdivision Rules and Regulations have been developed by HW, with the overall goal of strengthening and clarifying the stormwater management requirements to reflect the current knowledge and science of stormwater best management practices. These recommendations will help ensure that new
subdivisions in Lakeville will be designed to mitigate stormwater impacts to groundwater, surface water and wetlands with improved practices and techniques. Water quality in stormwater discharges from these sites will be improved, and the volume and peak flows of discharges will be better managed to mitigate downstream impacts. Low impact development (LID) techniques will be fostered under these recommendations rather than overlooked or in some cases prohibited as they are under the current Subdivision Rules and Regulations. The specific recommendations are summarized here:

- Basic terminology has been updated so that the words “drain” and “drainage” are replaced with “stormwater” where appropriate. This reflects an evolution in stormwater management from the earlier goal of simply conveying runoff from a property as quickly as possible to managing runoff in a way that provides water quality treatment, infiltration, peak flow attenuation and volume reduction.

- An addition was made to the Purpose Section to incorporate better stormwater management into the overall goal of the Subdivision Rules and Regulations.

- Several definitions have been added, including Stormwater Management Plan, Stormwater Management Standards, Best Management Practices, and Low Impact Development.

- More detailed standards and submittal requirements were added for erosion and sedimentation control during construction and ongoing operation and maintenance of stormwater management practices once they are constructed. These requirements create consistency with the Massachusetts Stormwater Standards.
SUBDIVISION RULES AND REGULATIONS

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SECTION I

A. Authority

Under the authority vested in the Planning Board of the Town of Lakeville by Section 81-Q of Chapter 41 of the Massachusetts General Laws, said Board hereby adopts these Rules and Regulations governing the subdivision of land in the Town of Lakeville.

B. References

The attention of all applicants submitting a plan for approval under these Rules and Regulations is directed to the provisions of the Coastal Wetlands Act (Chapter 130, Section 105), and of the Wetland Protection Act (Chapter 131, Section 40), and to all of the Massachusetts General Laws. Compliance with the requirements of the aforementioned provisions may necessitate major or minor changes in any plan submitted to the Board.

C. Purpose

These subdivision Rules and Regulations are enacted for the purpose of protecting the safety, convenience, and welfare of the inhabitants of Lakeville, put in effect by regulating the laying out and construction of ways in subdivisions providing access to the several lots therein, but which have not become public ways, and
ensuring sanitary conditions in subdivisions and in proper cases parks and open areas. The powers of the Planning Board and of the Board of Appeals under the Subdivision Control Law shall be exercised with due regard for the provision of adequate access to all of the lots in a subdivision by ways that will be safe and convenient for travel; for lessening congestion in such ways and in the adjacent public ways; for reducing danger to life and limb in the operation of motor vehicles; for securing safety in the case of fire, flood, panic and other emergencies; for ensuring compliance with the applicable zoning ordinances or by-laws; for promoting high quality, appropriate design and construction of subdivisions that are laid out to preserve the natural features of the site, to avoid areas of environmental constraints, to minimize negative impacts and alteration of natural and manmade features, and to avoid unnecessary impervious cover; for securing adequate provision for water, sewerage, drainage, underground utility services, fire, police, and other similar municipal equipment, and street lighting and other requirements where necessary in a subdivision; and for coordinating the ways in a subdivision with each other and with the public ways in Lakeville and with the ways in neighboring subdivisions. It is the intent of the Subdivision Control Law that any subdivision plan filed with the Planning Board shall receive the approval of such Board if said plan conforms to the recommendation of the Board of Health and to the reasonable Rules and Regulations of the Planning Board pertaining to subdivisions of land; provided, however, that such board may, when appropriate, waive, as provided for in Section eighty-one R, such portions of the Rules and Regulations as is deemed advisable. (Taken from Section 81-M of Chapter 41, M.G.L.)

**Commentary:** Added text to the purpose to encourage LID site design practices.

SECTION II – GENERAL

A. **Definitions**
APPLICANT

A person who applies for the approval of a plan of a subdivision. “Applicant” refers to “an owner or his agent or representative, or his assigns”. (Section 81-L of Chapter 41, M.G.L)

BASE FLOOD ELEVATION

The “Base Flood Elevation” shall be the level of flooding having a one percent chance of being equaled or exceeded in any given year, as designated on Federal Insurance Administration (FIA) maps, or, in the absence of such designation, to be determined by the Planning Board based upon the best available information regarding flood hazards, including any available United States Geologic Survey, Soil Conservation Service, and Corp of Engineers studies.

BEST MANAGEMENT PRACTICES (BMPs)

Control measures taken to mitigate changes to both the quantity and quality of stormwater runoff. BMPs are designed to reduce stormwater pollution, volume, and/or peak flows through a variety of pathways including filtration, vegetative uptake, microbial breakdown, infiltration, evapotranspiration, and detention. Acceptable BMPs and associated design criteria are found in the Massachusetts Stormwater Management Standards.
**Commentary: Consider adding definition for BMPs.**

<table>
<thead>
<tr>
<th><strong>BOARD</strong></th>
<th>The Planning Board of the Town of Lakeville.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CERTIFIED BY</strong></td>
<td>“Certified by (or endorsed by) the Planning Board”, as applied to a plan or other instrument required or authorized by the subdivision control law to be recorded, shall mean bearing a certification or endorsement signed by a majority of members of the Planning Board. (Section 81-L of Chapter 41, M.G.L.)</td>
</tr>
<tr>
<td><strong>DESIGNER</strong></td>
<td>Professional Civil Engineer or Land Surveyor registered to practice in Massachusetts. All work defined as professional engineering or surveying shall be done under the direct supervision of a Registered Professional Engineer or Surveyor.</td>
</tr>
<tr>
<td><strong>DEVELOPER</strong></td>
<td>A person (as hereinafter defined) who develops under a plan of a subdivision approved under Section III of these Rules and Regulations.</td>
</tr>
<tr>
<td><strong>EASEMENT</strong></td>
<td>A right acquired by public authority or other person to use or control property for a utility or other designated public purpose.</td>
</tr>
</tbody>
</table>
**LOT**
An area of land in one ownership, with definite boundaries, used, or available for use, as the site of one or more buildings.
(Section 81-L of Chapter 41, M.G.L.)

**LOW IMPACT DEVELOPMENT (LID)**
Low impact development is a site planning and design strategy intended to maintain or replicate predevelopment hydrology through the use of site planning, source control, and small-scale practices integrated throughout the site to prevent, infiltrate and manage runoff as close to its source as possible.

*Commentary: Consider adding definition for LID from stormwater manual.*

**MONUMENT**
A permanent marker to indicate a boundary.

**MUNICIPAL SERVICES**
Sewers, water drains, water pipes, gas pipes, electrical lines, telephone lines, fire alarm systems, and their respective appurtenances.

**OWNER**
The person holding the ultimate fee simple title to a parcel, tract or lot of land, as shown by the record in the Land Registration Office, Registry of Deeds, or Registry of Probate.

**PERSON**
An individual, or two or more individuals, or a group or association of individuals, a partnership, trust or corporation having
| **common or undivided interests in a tract of land.** |
| **PLAN, PRELIMINARY** | A plan of a proposed subdivision or re-subdivision of land prepared in accord with Section III to facilitate proper preparation of a definitive plan. |
| **PLAN, DEFINITIVE** | The plan of a subdivision as submitted (with appropriate application) to the Board for approval, to be recorded in the Registry of Deeds or filed with the Land Court when approved by the Board, and such plan when approved and recorded; all as distinguished from a preliminary plan. |
| **PLANNING BOARD AGENT** | Town employee or consultant authorized by the Planning Board to review subdivisions and administer the regulations. |
| **RECORDED** | “Recorded” shall mean recorded in the Registry of Deeds of Plymouth County, except that as affecting registered land, it shall mean filed with the Recorder of the Land Court. (Section 81-L of Chapter 41, M.G.L) |
| **ROADWAY** | The portion of a street intended for vehicular travel. |
STORMWATER MANAGEMENT PLAN

Plan describing the proposed methods and measures to prevent or minimize water quality and quantity impacts associated with a development project both during and after construction. It identifies selected LID source controls and treatment practices to address those potential impacts, the engineering design of the treatment practices, and maintenance requirements for proper performance of the selected practices.

Commentary: Consider adding definition for stormwater management plan.

STORMWATER MANAGEMENT STANDARDS

The ten (10) management standards established by the Massachusetts Department of Environmental Protection, and adopted by the Town of Lakeville, to address water quality (pollutants) and water quantity (flooding, low base flow, and recharge) by requiring the implementation of a wide variety of stormwater management strategies, including low impact design techniques.

Commentary: The discussion at the hearing suggested inserting the “name” of each of these 10 standards. Unfortunately, upon further review, the MA Standards do not have names or titles and it was decided that inserting the full language for each of the ten standards would be too unwieldy.
STREET, DEAD-END  A segment of a street, which only intersects another street at one end.

STREET, MAJOR  A street which, in the opinion of the Board is being used or will be used as a thoroughfare within the Town of Lakeville or which will otherwise carry a heavy volume of traffic (generally, over fifteen hundred (1500) vehicles per day). In residential areas volume per day shall be computed at the rate of ten (10) trips per dwelling.

STREET, MINOR  A street which, in the opinion of the Board, is being or will be used primarily, to provide access to abutting lots and which will not be used for through traffic.

STREET, PRIMARY  A street which connects two existing major streets.

STREET, SECONDARY  A street intercepting one (1) or more minor streets and which, in the opinion of the Board, is used or will be used to carry a substantial volume of traffic (generally, over four hundred (400) vehicles per day) from such minor street(s) to a major street or community facility, and normally including a principal entrance street to a shopping center, industrial park, planned unit
development, or a large subdivision or group of subdivisions, and any principal circulation street within such subdivisions. In residential areas volume per day shall be computed at the rate of ten (10) trips per dwelling day.

**SUBDIVISION**

“Subdivision” shall mean 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 the division of a tract of land into two or more lots shall not be deemed to constitute a subdivision within the meaning of the subdivision control law if, at the time when it is made, every lot within the tract so divided has frontage on (a) a public way or a way which the Town Clerk 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 Lakeville, having, in the opinion of the Planning Board, sufficient width, suitable grades, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed
use of the land abutting thereon or served thereby, and for the installation of municipal services to serve such land and the buildings erected or to be erected thereon. Such frontage shall be of at least such distance as is then required by zoning by-law, for erection of a building on such lot. 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 Lakeville into separate lots on each of which one of such buildings remains standing, shall not constitute a subdivision. (Section 81-L of Chapter 41, M.G.L.)

SUBDIVISION CONTROL

“Subdivision control” shall mean the power of regulating the subdivision of land granted by the Subdivision Control Law, Chapter 41, Section 81-A through GG inclusive as hereinafter amended.

TOWN

Town of Lakeville

WAY

A way is synonymous with the terms road, street, highway, and avenue, and shall
denote any such line or route for passage, whether public or private.

B. **Approved Plan Required**

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

C. **Source of Information Required**

In those cases in which the land shown on the plan is abutted by land of an owner not the owner of the land as shown, the Board may require a statement from the person who prepared the plan as to the source or sources of the information about the location of boundaries. A separate form for such statement will be furnished by the Board, see Form D, Designer’s Certificate.

D. **More Than One Building for Dwelling Purposes on Lot**

Not more than one (1) 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 Board. Such consent may be conditional upon the providing of adequate ways furnishing access to each site for such building in the same manner as otherwise required for lots within a subdivision. (Section 81-Q of Chapter 41 M.G.L.)

E. **Fees and Costs**
1. **Filing Fees.** The minimum filing fee shall be as follows:

- Form A Subdivision - Approval not required $100.00 per lot.
- Form B Preliminary Plan - $100.00 per plan.
- Form C Definitive Plan $700.00 + $100.00 per lot. **
- Form C Definitive Plan Following Submission of Form B at least 30 days Prior to that of Form C - $500.00 +$100.00 per lot **
- Repeat Petitions - $100.00 **
- Changes - $100.00 each
- Engineering Review Fee - $2,000.00 + $50.00/lot min **
- Inspection Fees - $4.00/Lineal Feet of Road

Retainer Fee – at completion of road (Release of Covenant pursuant to Section H-1) a retainer Fee of $15.00 per lineal foot or road shall be held through Bond or Passbook with Town Treasurer until such time as the Town accepts the roadway.

No newly constructed way shall be eligible for Town acceptance for a period of two full years from the time of Release of Covenant and shall then be presented at the next Town Meeting.

Site Plan Review - $1,000.00 **

* The cost of all engineering review and subsequent fees as determined by the applicant.

** The cost of advertising and mailings for public notifications will be borne by the applicant.

2. **Consultant Fees.** The fees of any professional consultants engaged by the Board to evaluate and provide information on subdivisions shall be borne by the applicant pursuant to M.G.L. Chapter 44 Section 53G.

3. **Other Costs and Expenses.** Costs incurred by the Planning Board for sending notices to abutters by Certified Mail shall be borne by the applicant. All other
expenses including, without limitation, recording fees and filing fees for
documents, and costs for sampling and/or testing required by the Board or its
agent shall be paid solely by the applicant.

F. **Payment**

All applications shall be accompanied by a check payable to the order of the
Town of Lakeville.

SECTION III – PROCEDURE FOR SUBMISSION AND APPROVAL OF PLANS

A. **Plan Believed Not to Require Approval**

1. **Submission of Plan.** Any person who wishes to cause to be recorded in the
Registry of Deeds or to be filed with the Land Court a plan of land and who
believes that his plan does not require approval under the Subdivision Control
Law may submit his plan and five (5) contact prints thereof and two (2) copies
of a properly executed Form A Application to the Planning Board
accompanied by the necessary evidence to show that the plan does not require
approval. Said person shall file, by delivery or registered mail, a notice with
the Town Clerk stating the date of submission to the Board for such
determination accompanied by a copy of said application and describing the
land to which the plan relates sufficiently for identification. If the notice is
given by delivery, the Town Clerk shall, if requested, give written receipt
therefore. Any plan determined to not completely satisfy Section III, A-2,
Contents, may be deemed not to have been submitted. Such plan may be
returned to the applicant, and a notice of the Planning Board’s determination
sent to the Town Clerk. When brought into conformity with the requirements
of Section III, A-2, such plan may be re-submitted and will be considered
without prejudice.
2. **Contents.** Said plan shall be legibly drawn in accordance with the Rules and Regulations of the Registry of Deeds, Chapter 36, Section 13A as amended pertaining to plan size, material, lettering and related requirements. The plan scale shall preferably be forty feet (40’) to the inch or such other scale as the Board may accept and may contain the following:

*Commentary: Consider moving the required contents to a checklist at the end of the regulations.*

a) Identification of the plan by name of owner of record and location of the land in question; the numbers of Lakeville assessors’ maps on which the land is located; the scale, north point, and date; and the name, signature, and stamp of a registered land surveyor.

b) The statement “Approval Under Subdivision Control Law Not Required” and sufficient space for the date and the signatures of all members of the Board in the lower right-hand corner of the plan.

c) Zoning classification; the location of any Zoning District Boundaries that may lie within the locus of the plan; and the applicable minimum front, side, and rear lot depths as required by the Zoning By-Laws.

d) In the case of the creation of a new lot, the remaining land area and frontage of the land in the ownership of the applicant shall be shown.

e) Notice of any decisions by the Zoning Board of Appeals, including but not limited to variances and exceptions, regarding the land or any buildings thereon.
f) Names of abutters from the most recent local tax list unless the applicant has knowledge of any changes subsequent to the latest available Assessor’s records.

g) Names and status (private or public) streets and ways shown on the plan.

h) Bearings and distances of all lines of the lot or lots shown on the plan.

i) Location of all existing buildings, wells, and septic tanks.

j) Location of all bounds, brooks, fences, and walls.

k) Locus map at one thousand (1,000) feet to the inch.

l) Area of land satisfying lot area requirements.

m) All wetlands areas shall be shown.

n) Upland circle as defined 5.1.2 of the Lakeville Town By-laws.

3. **Endorsement of Plan Not Requiring Approval.** If the Board determines that the plan does not require approval, it shall without a public hearing and within fourteen (14) days of submission endorse the plan.

   The Board may add to such endorsement a statement of the reason approval is not required. The original plan shall be returned to the applicant, and the Board shall also notify the Town Clerk in writing of its action.

4. **Determination that Plan Requires Approval.** If the Board determines that the plan does require approval under the Subdivision Control Law, it shall, within
fourteen (14) days of submission of the plan, so inform the applicant in writing and return the plan. The Board shall also notify the Town Clerk in writing of its action.

5. **Failure of Board to Act.** If the 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 fourteen (14) days after its submission, it shall be deemed to have determined that approval under the Subdivision Control Law is not required, and it shall forthwith make such endorsement on said plan, and on its failure to do so forthwith, the Town Clerk shall issue a certificate to the same effect.

B. **Preliminary Plan**

1. **Submission of a Preliminary Plan.** A Preliminary Plan of a subdivision may be submitted by the applicant and two (2) prints of it shall be filed with the Planning Board, and one (1) print shall be filed with each the Conservation Commission, the Board of Health, the Highway Department, Open Space Committee, the Building Department, the Fire Department, and the Board of Selectmen. The submission of such a Preliminary Plan will enable Town agencies and owners of property abutting the subdivision to discuss and clarify the details of such subdivision before a Definitive Plan is prepared. Therefore, it is strongly recommended that a Preliminary Plan be filed in each case.

A properly executed application Form B shall be filed with the Preliminary Plans submitted to the Planning Board. The applicant shall file by delivery or registered or certified mail a notice with the Town Clerk stating the date of submission for such approval of a Preliminary Plan accompanied by a copy of a properly executed application Form B. Any plan determined not to
completely satisfy Section III, B-2, Contents, may be deemed not to have been submitted. Such plan may be returned to the applicant, and a notice of the Planning Board’s determination sent to the Town Clerk. When brought in to conformity with the requirements of Section III, B-2, Contents, such plan may be resubmitted and will be considered without prejudice.

2. Contents. The Preliminary Plan shall be drawn on tracing paper with pencil at a suitable scale, preferably forty feet (40’) to the inch. The Plan shall be designated as a “Preliminary Plan” and to form a clear basis for discussion of the details of the subdivision and for preparation of the Definitive Plan, the plan may contain the following:

**Commentary:** Consider moving the required contents to a checklist at the end of the regulations.

a) The subdivision name, if any, boundaries, north point, date, scale legend and title “Preliminary Plan”.

b) The locus of the land shown on the plan at a scale of no smaller than 1:25,000 with sufficient information to accurately locate the plan.

b) The names and addresses of the record owner of the land and the subdivider and the name and address of the designer, engineer or surveyor who made the plan, which shall appear in the lower right-hand corner.

d) The names of all abutters, as determined from the last assessment, unless the applicant shall have more recent knowledge of such abutters (See Form E, Certified List of Abutters).

e) The existing and proposed lines of streets, ways, easements and any public or common areas with the subdivision, in a general manner.
f) Major features of the land such as existing walls, fences, monuments, buildings, single freestanding large trees, wooded areas, outcroppings, swamps, wetlands, water bodies, steep slopes (>15%), and natural waterways, drainage ditches.

**Commentary:** Consider adding steep slopes to existing constraints plan to help identify the most appropriate building envelopes.

g) The proposed system of sewage disposal and water installation and drainage, including adjacent existing natural waterways in a general manner.

h) The proposed stormwater management system to meet the Massachusetts Stormwater Management Standards in a general manner, including preliminary selection and sizing of best management practices (BMPs) and low impact design (LID) techniques.

**Commentary:** Consider adding separate line item for stormwater to emphasize importance.

i) The approximate boundary lines of proposed lots, with approximate areas and dimensions.

j) The names, approximate locations and widths of adjacent streets, or streets approaching or within reasonable proximity of the subdivision.

k) Existing and proposed topography in a general manner.

l) The proposed names of the proposed streets and a number on each lot on each proposed street.

m) The profiles of existing grades and approximate proposed finished grades of the roadway, and drain stormwater and sewer utilities.
Commentary: Consider revising text to be consistent with MASWMS.

n) Area of adjoining land and water of the applicant not presently being subdivided.

o) The zoning classification of land shown on the plan and the location of any zoning district boundaries.

3. Approval. The Planning Board may give such Preliminary Plan approval, within forty-five (45) days after submission, with or without modification or suggestion, after the Board’s review with the Conservation Commission, the Board of Health, the Highway Department, the Fire Department, and the Board of Selectmen. Such approval does not constitute approval of the subdivision but facilitates the preparation of the Definitive Plan and the securing of final approval thereof. One (1) copy of the Preliminary Plan will be returned to the applicant. In the event of disapproval, the Planning Board shall state the reasons for its disapproval in accord with Section 81-U of Chapter 41. Approval shall be effective for seven (7) months from the date of plan submittal or until a Definitive Plan evolving from the Preliminary Plan is filed, whichever comes first.

C. Definitive Plan

1. Submission of a Definitive Plan. Any person who submits a Definitive Plan of a subdivision to the Planning Board for approval shall file with the Board the following (all items required in paragraphs 1 and 2 of this section shall be submitted for a Definitive Plan to be “duly submitted” in accord with the General Laws of Massachusetts):
a) An original drawing of the Definitive Plan and five (5) contact prints thereof, dark line on white background. The original drawing will be returned after approval or disapproval.

b) A properly executed application Form C, Application for Approval of a Definitive Plan, including the time within which the public utilities in the subdivision shall be provided; Form D, Designer’s Certificate; and Form E Certified List of Abutters. Approval of all plans shall be upon the condition that all ways shown thereon and public utilities required by the Board shall be completed and installed within the time so specified.

c) The appropriate filing fee as specified in Section II, E (Fees and Costs) of these Rules and Regulations.

d) The applicant 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 completed Application for approval of Definitive Plan (Form C).

2. Contents. The Definitive Plan shall be prepared by a professional engineer and land surveyor registered in Massachusetts and shall be clearly and legibly drawn in black India ink upon tracing cloth. The plan shall be at a scale of one inch (1”) equals forty feet (40’), or such other scale as the Planning Board may accept to show details clearly and adequately, and shall include plans and profiles of each individual street at a scale of one inch (1”) equals forty feet (40’) horizontal and one inch (1”) equals four feet (4’) vertical. All elevations shall refer to the U.S.C. and G. Datum. Sheet sizes shall be twenty-four by thirty-six inches (24” x 36”) including a three quarter inch (3/4”) border. All plans shall be accompanied by a sheet showing the entire subdivision and
adjacent streets and dimensions of the lots and streets and lot numbers. The Definitive Plan shall contain the following information:

**Commentary:** Consider moving the required contents to a checklist at the end of the regulations.

a) A title, appearing in the lower right-hand corner of the plan, showing the name of the subdivision, if any; the date; scale; the names and addresses of the applicant; and the names of the designer, engineer and surveyor who made the plan.

b) North point, benchmark, and boundaries of the subdivision.

c) Location and ownership of abutting property as it appears on Form E, Certified List of Abutters unless the applicant shall have more recent knowledge of such abutters, including all abutting land owned by the applicant not presently being subdivided and all other land within five hundred feet (500’) of the boundaries of the land shown in the subdivision. Costs incurred by the Planning Board for sending notice to abutters by Certified mail shall be borne by the applicant.

d) Major features of the land, such as existing waterways, swamps, all wetlands and water bodies, natural drainage courses, wall fences, buildings, historic markers, milestones, bridges, clearly defined trails, large trees, wooded areas, outcroppings, steep slopes (>15%), and ditches which exist on or near the site at the time of survey.

**Commentary:** Consider adding steep slopes to existing constraints plan to help identify the most appropriate building envelopes.

e) Lines of existing and proposed streets, ways, lots, lot numbers, or other designation of each lot, easements, and public or common areas within the
subdivision. (The proposed names and numbers of proposed streets and lots shall be shown in pencil until they have been approved by the Planning Board.)

f) Existing wells, septic systems, and buildings on the property and within one hundred feet (100’) of the property line.

g) Sufficient data to determine the location, direction, and length of every street and way line, lot line and boundary line, and to establish these lines on the ground. This shall include the lengths and bearings of plan and boundary lines of all subdivision lot lines including lot frontage on the streets, of the boundary lines of all streets and easements, and the lengths, radii, tangents, and central angles of all curves in lot lines and street lines. All angle points, or intersections of tangents along the street lines, shall be shown, areas of lots with lot numbers and the area and frontage on public ways as set forth in Section 81-L of Chapter 41, M.G.L. of adjoining lands of the applicant not included in the subdivision will be shown.

h) Location of all permanent monuments properly identified as to whether existing or proposed.

i) Location, names and present widths of streets or private ways bounding, approaching or within reasonable proximity of the subdivision, showing both roadway widths and rights-of-way widths.

j) The zoning district classification of land shown on the plan, the location of any zoning district boundaries that lie within the locus of the plan, and the applicable minimum front, side and rear yard depths for each lot as is required by the Zoning By-laws. The existing and proposed location of the
Base Flood Elevation (see definition) if encountered within, or within 100 feet (100’) of, the subdivision.

k) Location of the line of building setback required by zoning.

l) Indication of all easements, covenants or restrictions applying to the land and their purposes, whether or not within the subdivision, including any decision on appeal or any variances or exceptions made by the Zoning Board of Appeals applicable to the subdivision of the land or any building thereon.

m) If the property that comprises the subdivision or any part or boundary thereof has been examined, approved, and confirmed by the Massachusetts Land Court, such information shall be noted on the plot with case numbers and other pertinent references to Land Court Procedure, and the same requirement shall apply to any adjoining parcels of land of the applicant.

n) Suitable space to record the action of the Planning Board and the signatures of the five (5) members of the Planning Board. Items n. thru u. may be submitted on the same sheet as the Definitive Plan or on separate sheets.

o) Proposed layout (including plans and profiles) of street construction, storm drainage, water supply and sewage disposal systems, including grades.

p) Existing roadway profiles on the exterior lines drawn in fine black line, dotted for left and dashed for right side, and proposed profile of the finished center-line drawn in fine black solid line of proposed streets at a horizontal scale of one inch (1”) equals four feet (4’) or such other scales acceptable to the Planning Board. At least two (2) bench marks are to be
shown on plans and profiles, and grade elevations at every 50 foot (50’) station except in vertical station. All existing and proposed intersections, sidewalks and probable location of driveways on lots that abut intersections, shall be shown with all proposed grade elevations calculated. Elevations are to be referred to as either mean sea level or zero equals mean low water as established by the Coast and Geodetic Survey. Gradient shall be shown by figures expressed in percent.

q) Existing and proposed topography at five foot (5’) contour intervals. The Board may require additional information on abutting land, whenever it is deemed necessary, to ensure compatibility of grades and drainage. Reference benchmarks must be identified.

r) The relative error of closure shall be acceptable to Massachusetts Land Court standards. A signed statement to this effect by the surveyor shall appear on the tracing cloth original. A copy of the traverse notes shall be furnished the Board upon request.

s) Location and results of soil, percolation, and water table tests.

t) Drainage Stormwater management design. Existing drainage characteristics of the general area of the proposed subdivision and the effect of the proposed use and any proposed stormwater drainage facilities on the existing drainage characteristics shall be included with the plan. A stormwater management drainage plan shall be prepared by a Registered Professional Engineer showing the proposed stormwater management system that meets the Massachusetts Stormwater Management Standards. The plan should show existing and proposed streets, lots, five foot (5’) contours, and other pertinent data; the drainage limits and acreage of the area tributary to each stormwater inlet and culvert, location and type of
inlets proposed; and location, size, length, invert elevations and slope of proposed stormwater pipes, drains, and culverts, structural details of inlets, manholes, pipe, headwalls, and all other stormwater BMPs, drainage structures required to complete the plan shall be attached. (The grading plan may be used provided that it includes all the information required here. See Section IV, Design Standards, Chapter D, Storm Water Management, for details on stormwater drainage standards.) A stormwater report shall also be submitted, which describes how each of the stormwater standards are met, as well as detailed sizing calculations of best management practices (BMPs) and information on the low impact design (LID) techniques implemented.

 Commentary: Consider revising text to be consistent with MASWMS.

 u) Location and species of proposed street trees and location of trees to be retained will be determined in the field by the Highway Superintendent.

 v) Cross sections typical of each street, roadway and sidewalk to be constructed.

 w) In tabular form as follows for each sheet of the subdivision plan as submitted

   1) The total area which is being subdivided on each sheet.
   2) The total area of lots included on each sheet.
   3) The total of areas dedicated for street purposes, drainage, sewer or utility easements on each sheet.
   4) The total of areas reserved for parks, open space, schools, and other public use on each sheet.
x) Upland circle as defined 5.1.2 of the Lakeville Town By-Laws. Form A or Form C shows an upland circle.

y) Erosion and Sediment Control Plan: The Erosion and Sediment Control (ESC) Plan shall be designed to ensure compliance with the Massachusetts Stormwater Management Standards, and to ensure that the Massachusetts Surface Water Quality Standards, (314 CMR 4.00) are met during construction. The ESC Plan shall show the location of and describe the Construction BMPs to be used on the site and the required maintenance, as well as other relevant information, including (as applicable):

1. Locations of the proposed limits of land disturbance on the site, with provisions that the limits must be marked with tape, signs, or orange construction fence by the developer at the site prior to commencing any land disturbance activities, and shall be inspected by the owner or authorized designated agent;

2. Location and technical description of appropriate erosion and sediment control measures proposed to be installed and inspected by the Board or its designee prior to soil disturbance in accordance with the approved plans;

3. Location and technical description of the perimeter sediment control system that shall be installed and maintained around active construction areas such as, but not limited to, borrow or stockpile areas, roadway improvements, and areas within 50 feet of a building under construction, to be inspected by the Board or its designee prior to initial disturbance;
4. Location and means of diversion of offsite runoff from highly erodible soils and steep slopes to more stable areas;

5. A Sequence of Construction for all land disturbance activities exceeding one (1) acre in size (including lot development) that requires stormwater controls to be installed and the soil stabilized, as disturbance beyond the one (1) acre continues. Mass clearing and grading for sites greater than 5 acres in size shall not be permitted without prior written approval from the Board or its Agent;

6. Location of soil stockpiles and provision to stabilize exposed soils within five (5) business days of completion of construction of a given area. Stockpile side slopes shall not be greater than 2:1 unless the applicant provides evidence acceptable to the Board that adequate measures will be taken to secure stockpiles on the site;

7. Location and description of vehicle tracking pad(s) to be constructed at all entrance/exit points of the site to reduce the amount of soil carried onto roadways and off the site;

8. Location and description of proposed dust controls to be employed on the site, minimizing soil disturbance through applying mulch and establishing vegetation, water spraying, surface roughening, and/or applying polymers, spray-on tackifiers, chlorides, and barriers;

9. A program for monitoring and maintenance of erosion and sediment control measures throughout the course of construction shall be required as part of the Operation and Maintenance Plan;
10. Provisions to ensure that temporary sediment trapping devices are not removed until permanent stabilization is established in all contributory drainage areas, as well as provisions to ensure that stabilization is established prior to converting sediment traps/basins into permanent (post-construction) stormwater management facilities;

11. Provisions to ensure that all facilities used as temporary measurers shall be cleaned prior to being put into final operation and are inspected by the Superintendent of Streets or its designee, and indicating that areas to be used as post-construction infiltration practices should be protected during construction to prevent compaction;

12. A program for vegetative stabilization of exposed soil through the establishment of permanently growing vegetation;

13. The Plan must demonstrate that the area of disturbance shall be kept to a minimum and that disturbed areas remaining idle for more than 14 days shall be stabilized with hydroseeding or other appropriate stabilization measure(s);

14. The Plan must specify that permanent seeding be undertaken in the spring (from March through June) or in the late summer and early fall (from August 1st to October 15th). During the peak summer months and in the fall after October 15th, when seeding is found to be impractical, an appropriate temporary mulch or sod shall be applied.
Permanent seeding may be undertaken during the summer if plans provide for adequate mulching and irrigation;

15. The Plan must demonstrate that the phasing of construction will account for the time required for vegetation to grow in and stabilize slopes. Where roads may be constructed adjacent to any slopes, interim measures must be taken to ensure that sediment is not conveyed by these impervious surfaces to stormwater management systems;

16. The Plan must specify that all slopes steeper than 3:1, as well as perimeter dikes, sediment basins or traps, and embankments must, upon completion, be immediately stabilized with sod, seed, anchored straw mulch, or other approved stabilization measures; areas outside of the perimeter sediment control system must not be disturbed; and

17. The Plan must specify that the cut side of roads and ditches shall be stabilized immediately with rock rip-rap or other non-erodible erosion control liners, or where appropriate, vegetative measures such as sod.

z). Operation and Maintenance Plan: An Operation and Maintenance Plan (O&M Plan) is required at the time of application for the Definitive Plan Approval. The O&M Plan shall be designed to ensure compliance with the Massachusetts Stormwater Management Standards and to ensure that the Massachusetts Surface Water Quality Standards are met in all seasons and throughout the life of the system. The O&M Plan shall be conveyed to the Superintendent of Streets after construction, which will perform the ongoing maintenance of the system. The O&M Plan shall include:

1. A map showing the location of the systems and facilities including, but
not limited to, catch basins, manholes/access lids, drain pipes, and stormwater BMPs;

2. An Inspection and Maintenance Schedule for all permanent stormwater BMPs, including routine and non-routine maintenance tasks to be performed;

3. Estimated O&M budget;

4. Drainage Easement(s)

It shall be the responsibility of the developer to make any necessary agreements/easements with any abutter(s) where any aspect of the proposed stormwater management system is to be carried to the boundaries of the subdivision. Such agreements/easements shall be presented to the Board, in recordable form, prior to the approval of a definitive subdivision plan.

The recipient of subdivision approval, and any successor-in-title, shall provide and furnish the Town the perpetual right, privilege, and authority, entirely at the option of the Town, to enter upon any rights-of-way within the subdivision and upon any lot, or easements pertinent to said stormwater management system, within which said system is located, for repair and maintenance purposes of said system.

a) Drainage easements shall be provided by the property owner(s) as necessary for:

i. Access for facility inspections and maintenance;
ii. Preservation of stormwater runoff conveyance, infiltration, and treatment areas and facilities, including flood routes for the 100-year storm event; and

iii. Direct maintenance access by heavy equipment to structures requiring regular maintenance.

b) Drainage easements shall be a minimum of twenty (20’) feet in width and may be larger, as necessary, at the discretion of the Planning Board.

c) Drainage easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Board.

d) Drainage easements shall be recorded with the Plymouth County Registry of Deeds.

Commentary: Consider adding text for ESC and O&M Plan submittal requirements to meet Standards 8 and 9 from MASWMS. The text provided can be adjusted to better suit Lakeville if needed; for example, the following sentence from the O&M language may not be applicable: “The O&M Plan shall be conveyed to the Superintendent of Streets after construction, which will perform the ongoing maintenance of the system.”

D. Soil Survey and Percolation Tests

Where appropriate, the Planning Board may require at the expense of the applicant soil surveys and percolation tests to establish the suitability of the land for the proposed storm drainage installations and proposed street construction.
Such soil surveys and tests must be filed with all plans for non-residential subdivisions or multi-family residences.

E. **Review by Town Officials**

1. **Review by Board of Health as to suitability of the land.** At the time of filing of the Definitive Plan, the applicant shall also file with the Board of Health two (2) contact prints of the Definitive Plan, dark line on white background, together with such information in the nature of percolation tests and deep test holes as the Board of Health may require. The Board of Health shall within forty-five (45) days after filing of the plan report to the Planning Board in writing approval or disapproval of said plan. If the Board of Health disapproves said plan it shall make specific findings as to which, if any, of the lots shown on such plan cannot be used for building sites without injury to the public health, and include such specific findings and the reasons therefore in such report, and, where possible, shall make recommendations for the adjustment thereof.

2. **Review by other Town Officials.** It is the developer’s responsibility to distribute copies of the Definitive Plan to Town Officials and obtain a dated receipt of the same as follows:

   One (1) copy each to the Conservation Commission, Highway Surveyor, Fire Department, Police Department, **Open Space Committee**, Town Planner, and **the Building Commissioner acting as the Stormwater Review Authority**.

Before the Definitive Plan is approved, the Board will request written statements from the above officials with regard to the proposed improvements in the following respect:
a) Conservation Commission as to potential involvement with Chapter 131, Section 40, G.L. and the effects of the subdivision on streams, wildlife and similar considerations within the scope of the Conservation Commission.

b) Highway Surveyor as to the design of the street system, location of easements, monuments, street lights, and stormwater management drainage systems.

c) Fire Department as to location of hydrants, installation of the alarm system and emergency access.

d) Police Department as to street safety, both vehicular and pedestrian, and access for emergency vehicles.

e) Town Planner as to overall layout of streets, lots, and stormwater management drainage systems in terms of adherence to principles of good planning.

f) Building Inspector as to suitability of lots for building purposes.

F. Public Hearing

Before taking any action to approve, modify and approve or disapprove a Definitive Plan, the Board shall hold a hearing at which parties in interest shall have an opportunity to be heard, in person or by agent or attorney. Notice of the time and place of such hearing and of the subject matter, sufficient for identification shall be published in a newspaper of general circulation in the Town of Lakeville once in each of two (2) successive weeks, the first publication to be not less than fourteen (14) days before the date of the hearing and by mailing a copy of such advertisement to the applicant and to all owners of land abutting the land and all owners of land within five hundred feet (500’) of a property line of the land shown on the plan as shown on the most recent tax list.
G. Planning Board Procedure

The procedure that the Board will follow with regard to approval, disapproval, or modification of the Definitive Plan submitted by the applicant will be that as set forth in Chapter 41, Section 81-U of the General Laws, as amended. In summary, the Board, after receiving the Plan and profiles, will review the same to determine whether they are in compliance with its adopted Rules and Regulations. Before approval of the plan, the Board shall establish that the street pattern is safe and convenient, that proper provision is made for street extension and that all other purposes of the General Law are met. The Board may, as a condition of granting approval under Section 81-U, impose reasonable requirements designed to promote the health, convenience, safety and general welfare of the community and to benefit the Town. In such event, the Board shall endorse such conditions on the plan to which they relate, or set forth a separate instrument attached thereto, to which reference is made on such plan and which, shall for the purpose of the Subdivision Control Law be deemed to be a part of the plan.

H. Performance Guarantee

Before endorsement of its approval of a Definitive Plan of a subdivision by the Planning Board, the subdivider shall agree to complete the required improvements (construction of ways and its installation of municipal services) specified in Section IV for any lots in a subdivision, such construction and installation to be secured on one or in part by one and in part by the other, of the following methods which may from time to time be varied by the applicant:

1. Final Approval with Covenant. The subdivider shall file a Covenant (see Form F), executed and duly recorded by the owner of record, running with the land, whereby such ways and services as specified in Section IV not covered by
bond or deposit under “2.” hereof, shall be provided to serve any lot before such lot may be built upon or conveyed, other than by mortgage deed.

2. Final Approval with Bonds or Surety. The subdivider shall either file a performance bond (see Form G) or a deposit of money (see Form H) or negotiable securities (see Form I) or bank passbook (see Form J) in an amount determined by the Planning Board to be sufficient to cover the cost of all or any part of the improvements specified in Section IV not covered by a Covenant under H-1 hereof. Such bond or security, if filed or deposited, shall be approved as to form and manner of execution by the Town Counsel and as to sureties by the Town Treasurer and shall be contingent on the completion of such improvements within a reasonable time period specified by the Board. The period for completion in H-1 and H-2 may be extended by the Planning Board at the written request of the subdivider accompanied by satisfactory proof that such extension is necessary and in the public interest.

I. Approval or Disapproval

The action of the Board in respect to such plan shall be by vote, copies of which shall be filed with the Town Clerk and sent to the applicant. If the Board modifies or disapproves such plan, it shall state in its vote the reasons for its action. Failure of the applicant to submit revised plans and other required submittals within six (6) months of approval with modification shall automatically rescind approval of the plan. The Board shall rescind its disapproval if, within six (6) months of such disapproval, the applicant submits revised plans and other required submittals fully conforming to the Rules and Regulations of the Board and resolving the specific reasons for disapproval.

The action of the Board to approve or disapprove a definitive plan must occur within ninety (90) days after submission, except in the case of a subdivision
showing lots in a residential zone, where no preliminary plan has been submitted and acted upon or where forty-five (45) days has not elapsed since submission of such preliminary plan, the Board has one hundred thirty-five (135) days to take final action on the definitive plan.

Final approval, if granted, shall be endorsed on the original drawing of the Definitive Plan by the signatures of a majority of the Planning Board but not until the statutory twenty (20) day appeal period has elapsed following the filing of the Board’s certificate of approval or disapproval, as the case may be, with the Town Clerk and said Clerk has notified the Board that no appeal has been filed. If appeal has been made, said endorsement shall be made after the entry of a final decree of the Court sustaining the approval of such plan. Final approval shall be subject to the construction specifications contained herein and to the rules and requirements of the Planning Board. After the Definitive Plan has been approved and endorsed, the Board shall return the original to the applicant.

The Board may extend the period permitted by statute between submission of a Definitive Plan and action thereon upon written request of the applicant.

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

1. **Time for Completion.** If the ways in any subdivision are not completed and the utilities aforesaid are not installed within the time so agreed to by the applicant or so required by the Board, any such bond may be enforced and any such deposit may be applied by the Planning Board for the benefit of the Town. Ways or portions thereof not completed within the time required shall thereafter be competed in accordance with the design and construction standards of the Board in effect upon the expiration of such time.
2. **Endorsement.** The endorsement of the plan approval by the Board shall be valid for a period of eight (8) years from the date of said endorsement.

At least twenty (20) days prior to endorsement, all required Covenants shall be provided to the Board’s agent along with a Designer’s Certification that title to the premises shown on said plan and appurtenances thereto including any off-site easements and rights-of-way are in the applicant’s name and are free of all encumbrances or that the encumbrances set forth will not preclude any required subdivision improvements.

No extensions will be granted that will bring the development beyond its eighth year. Beyond eight (8) years following the date of endorsement of the Definitive Plan, any undeveloped areas must conform to the current Zoning By-Laws and the Rules and Regulations.

J. **Recording**

The applicant shall file all approved Definitive Plans and the Covenant, if any, at the Registry of Deeds, and shall notify the Board in writing presenting evidence of the recording of the plan and the Covenant. The applicant shall deliver to the Board one (1) copy of the approved and recorded Definitive Plans, and a copy of an affidavit filed by the owner stating that the title to the premises shown on said plan and appurtenances thereto are in the name of the applicant and free of all encumbrances or with encumbrances as set forth.

K. **Release of Performance Guarantee**

Upon the completion of ways and the installation of municipal services in accordance with these Rules and Regulations, security for the performance of which was given by bond, deposit or covenant, or upon the performance of any
covenant with respect to any lot, the applicant may send by registered mail to the Town Clerk a written statement in duplicate that the said construction or installation in connection with which such bond, deposit or covenant has been given, has been completed in accordance with said rules and regulations, such statement to contain the address of the applicant, and said Clerk shall forthwith furnish a copy of said statement to the Planning Board. If the Planning Board determines that said construction or installation has been completed, it shall release the interest of the Town in such bond and return the bond or deposit to the person who furnished the same, or release the covenant by appropriate instrument, duly acknowledged, which may be recorded (see Form K).

If the Board determines that said construction or installation has not been completed, it shall specify to the applicant in writing the details wherein said construction and installation fails to comply with its Rules and Regulations and do so within forty-five (45) days after the receipt by said Clerk of said statement. All obligations under the bond shall cease and terminate by operation of law, any deposit shall be returned and any such covenant shall become void. In the event that said forty-five (45) day period expires without such specification, or without the release and return of the bond or return of the deposit or release of the covenant acknowledged, the Town Clerk shall issue a certificate to such effect, duly acknowledged, which may be recorded.

L. As Built Plan

The subdivider shall file with the Planning Board an as built plan on tracing cloth of completed street or streets, utilities and easements together with proper legal descriptions for initiating an article in the Town Warrant pursuant to the acceptance of the ways by the Town Meeting and shall grant a deed to the Town of the streets, utilities and easements, as contained in the plan said deed to be
recorded by the Town upon acceptance of the streets by the Town Meeting (see also Section IV, A-7 and 8, and Section IV, C-2, d).

SECTION IV – DESIGN AND CONSTRUCTION STANDARDS

A. General

1. No street or way through private property shall be recommended for acceptance by the Town unless the same be previously constructed and completed in accordance with the Standard Cross Section (see Figure A) and the following specifications.

2. Unless otherwise specified, all the work and the materials used in the work to be done shall conform to the requirements of the “Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, 1973 Edition as amended”, hereinafter referred to as the Standard Specifications, as amended and the Special Provisions included hereinafter. Appropriate illustrations are found in “Commonwealth of Massachusetts, Department of Public Works, Construction Manual Part 3, 1966 as amended”.

3. Supplementing the aforesaid Standard Specifications, certain specifications or special provisions shall apply particularly to the work to be done hereunder. References in the following specifications, unless otherwise stated, are to be aforesaid Standard Specifications, amendments or addenda. These specifications and special provisions shall take precedence and shall govern when they are stricter.
4. To facilitate reference, each paragraph in these specifications is noted with paragraph number of the particular section as contained in the Standard Specifications.

5. The context of work required is as shown upon approved plans, and is in compliance with the Standard Cross Section Plans. Stakes shall be set which will indicate the exact amount of cut or fill.

6. As each construction operation is completed, it shall be approved by the proper Town authority prior to starting work on the succeeding operation.

7. At the time the street or way or portion thereof is ready for acceptance and to facilitate acceptance by the Town of Lakeville, the developer shall have prepared and certified by a Registered Land Surveyor a “Plan of Acceptance” drawn with India ink on tracing cloth (size 18” x 24” or 24” x 36”) showing widths, lengths, bearings of all boundary lines of streets and easements and radii, tangents and central angles of all curves in street lines. It shall show that all stone bounds have been set.

A blank space (4” x 8”) shall be provided on the lower right hand corner on the plan for a title block to be filled in by the developer. The surveyor shall place a certification on the plan stating “The street (or way or portion thereof) is laid out and the bounds have been set as shown on this plan” and shall be dated, signed and the surveyor’s stamp affixed thereon. The plan shall be submitted to the Board of Selectmen.

8. The developer shall have the original plans and profiles that were submitted to the Planning Board and that are on file in the Planning Board office, corrected and certified by his Engineer to show the actual as built locations and grades
of all utilities and roadway profile and any changes authorized by the Planning Board.

B. Streets and Roadways

1. Location.

   a) All streets in the subdivision shall be designed so that, in the opinion of the Planning Board, they will provide safe vehicular travel 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 the rules and regulations of the Board of Selectmen, and the Superintendent of Highways.

   b) The proposed streets shall conform in location, so far as practicable, to any existing plans of the Planning Board, and where required by the Planning Board, to the existing street system.

   c) 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.

   d) 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.

2. Alignment.

   a) Street jogs with centerline offsets of less than one hundred and fifty feet (150’) shall be avoided.
b) The minimum horizontal centerline radii of streets shall be as follows:

- Secondary, Major, and Primary Streets - Four Hundred Feet (400’)
- Minor Streets - One Hundred and Fifty Feet (150’)


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

d) Property lines at street intersection shall be rounded or cut back to provide for a curb radius of not less than thirty feet (30’). However, when the intersection of two (2) streets varies more than ten (10) degrees from a right angle, the radius of the curve at the obtuse angle may be less and of the acute angle may be greater than thirty feet (30’) to the extent approved or required by the Planning Board.

e) Streets shall be laid out so as to intersect at intervals in a range of six hundred feet (600’) to twelve hundred feet (1200’) in length, unless otherwise specified by the Planning Board. In special instances the Planning Board may approve an easement for a future street, in lieu of actual construction of a cross street.

3. **Width.**

a) The minimum width of any street right-of-way, including dead-end streets, shall be fifty feet (50’). The Planning Board may reduce this width to no less than forty feet (40’) where such a reduction results in a higher quality design and does not compromise the health, safety or welfare of Lakeville residents.
Commentary: Consider allowing some flexibility here for LID techniques. For example, for subdivisions less than 40 houses, ROWs can be as little as forty feet (40’).

b) When on a secondary or major street and potential volume warrants, the Board may require a greater right-of-way than that specified above and may require construction of a divided highway.

c) Major streets and such secondary streets, which in the judgment of the Planning Board may in the future be changed in character to become major streets, shall have a minimum right-of-way of sixty feet (60’).

d) When a minor street will provide the only access for lots fronting on a length in excess of five hundred feet (500’) or where, on a major street, potential volume warrants, the Planning Board may require construction of a divided roadway.

4. Grade.

a) The centerline grade for any street shall not be less than five tenth of one percent (0.5%).

b) The maximum centerline grade for streets shall be as follows:

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Maximum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Street</td>
<td>Six Percent (6%)</td>
</tr>
<tr>
<td>Secondary Street</td>
<td>Six Percent (6%)</td>
</tr>
<tr>
<td>Primary and Major Streets</td>
<td>Four Percent (4%)</td>
</tr>
</tbody>
</table>

c) Where changes in grade exceed one percent (1%), vertical curves, as required by the Board will be provided; and where a grade is five percent (5%) or greater within one hundred and fifty feet (150’) of the intersection of street right-of-way lines, there shall be provided in a residential
subdivision a leveling area of at least seventy-five feet (75') with a maximum grade of three percent (3%), and in all other subdivisions, a leveling area of at least two hundred feet (200’), with a maximum grade of two percent (2%); and at all other intersections there shall be a leveling area of at least fifty feet (50’).

5. **Dead-End Streets.**

a) For the purposes of this section, any proposed street which intersects solely with a dead-end street shall be deemed to be an extension of the dead-end street. Dead-end streets and their extensions, if any, shall not be longer than seven hundred and fifty feet (750’).

b) Dead-end streets shall be provided at the closed end with a turn-around having an outside roadway diameter of at least one hundred twenty (120’) feet and a property line diameter of at least one hundred forty (140’) feet unless otherwise specified by the Planning Board. If the dead-end street is not intended to connect with another street at some future point in time, the Planning Board may, at its option, require a minimum outside roadway diameter of one hundred sixty (160’) feet.

A property line diameter of one hundred eighty (180’) feet and the placement of a circular landscape island with minimum radius of forty (40’) feet at the center of the turn-around.

**Cul-de-sacs shall have a minimum forty (40’) foot radius at the right-of-way line for residential streets and a minimum sixty (60’) foot radius at the right-of-way line for commercial and industrial roads.**

**Vegetated or undisturbed islands are required in cul-de-sacs and the preferred design is a cul-de-sac “tear drop” with a tapered entrance/exit.**
point and a rounded tip. Turning radii at the outermost edge shall meet the
minimum radii requirements but shall also be designed in a manner that
considers natural topography and preserves natural amenities where
possible. Therefore, where natural features such as significant trees or
bedrock outcrops may be preserved within the cul-de-sac island, the
applicant is encouraged to widen turning radii where necessary to preserve
these features. Cul-de-sacs may also be used as vegetated depressions to
treat stormwater runoff in landscaped bioretention facilities.

6. Roadway Construction. Numbers refer to specific sections in the Standard
Specifications. The Standard Specifications should be referred to for more
detailed descriptions of the work, materials, and construction methods. The
roadway shall be graded and prepared for pavement as follows:

a) 101 Clearing and grubbing shall be performed to remove all stumps,
brush, roots, and like material from the area of the traveled way, berms,
shoulders, sidewalks, and utility trenches, but wherever feasible, existing
vegetation shall be protected. Cleared materials shall be removed from the
property unless otherwise approved by the Board.

b) 120 Earth excavation shall be the removal of all materials encountered
within the area of the traveled way, berms, shoulders, and sidewalks down
to the true surface of the subgrade or to suitable material in areas where
unsuitable material exists, in preparation for foundation of roadway,
sidewalks, driveways, and berms. Approved material obtained from the
excavation may be used in fills as required if, in the opinion of the
Planning Board, they are suitable.

c) 150 When in the opinion of the Planning Board, suitable material is not
available within the limits of the roadway location to form the subgrade or
sub-base, the developer shall obtain suitable additional material from other sources in accordance with this section and as may be approved by the Planning Board.

d) 170 The subgrade surface, fifteen and one-half inches (15 and ½”) below the finished surface grade in residential streets, and seventeen and one-half inches (17 and ½”) below the finished surface grade in all streets in non-residential subdivisions shall be prepared true to the lines, grades and cross sections given and properly rolled. All soft or spongy material below the subgrade surface shall be removed to a depth determined by the Planning Board. The space thus made shall be filled with special gravel borrow, containing no stones over six inches (6”) in their largest dimension.

e) 401 The gravel sub-base or foundation shall be spread in two six inch (6”) layers on the surface of the subgrade. The first six inch (6”) layer shall be spread in conformity with requirements of Section M-1.03.0 gravel borrow Type A six inches (6”) largest dimension Standard Specifications. The second six inch (6”) layer shall be spread in conformity with requirements of Section M-1.03.0 gravel borrow Type C two inches (2”) largest dimension of the Standard Specifications.

Each layer shall be thoroughly watered, rolled and compacted true to line and grade. Any depressions that appear during and after the rolling shall be filled with additional gravel and re-rolled until the surface is true. Suitable subgrade stability fabric may be required by the Planning Board prior to gravel placement.

f) Final grading, rolling and finishing including the shaping, trimming, rolling and finishing of the surface of the sub-base prior to application of
gravel for surfacing of the roadway base courses for walks and berms shall be in accordance with this section and as directed by the Planning Board. Compaction testing and soil gradations shall be performed as required by the Planning Board.

g) Roadway pavement shall be constructed for the full length of all streets within the subdivision and shall have the curb radii required in Section IV, B-2, b above. The center line of all roadways shall coincide with the center line of the street right-of-way unless a deviation is approved by the Planning Board. The minimum widths of a roadway pavement shall be as follows:

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Minimum Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major and Primary Streets</td>
<td>Thirty Feet (30’)</td>
</tr>
<tr>
<td>Secondary Streets</td>
<td>Twenty-Six Feet (26’)</td>
</tr>
<tr>
<td>Minor Streets</td>
<td>Twenty-Four Feet (24’)</td>
</tr>
<tr>
<td>Dead-end Streets</td>
<td>Twenty-Four Feet (24’)</td>
</tr>
</tbody>
</table>

h) Pavement for roadways in subdivisions shall be Class I Bituminous Concrete Pavement Type I-1. The material and construction methods for laying pavement shall conform in every way to the applicable sections of Section 400 and Section M of the Standard Specifications except that no such construction shall be undertaken before March 30th of any year nor after December 1st of any year without written permission of the Planning Board. Pavement on minor and secondary residential subdivision streets shall be laid to a finished depth of three and one-half inches (3 and ½”) and laid in two (2) courses. The base course shall be two inches (2”) and the top course shall be one and one-half inches (1 and ½”). Pavement on major and non-residential subdivision streets shall be laid to a finished depth of five and one-half inches (5 and ½”) and laid in three (3) courses. The base course shall be two inches (2”), binder course shall be two inches
(2”) and top course shall be one and one-half inches (1 and ½”). The Planning Board may require the installation of Petromat fabric or any approved equal over any areas in the base pavement that, in their opinion, require reinforcement prior to the placement of an additional course of pavement.

7. Curbs and Berms.
   a) Bituminous concrete berms and curbs of six inches (6”) in height shall be provided along each side of the roadway where there are sidewalks. All other roadways without sidewalks except where granite curbs shall be provided, shall have eighteen inch (18”) flat berm, one (1) layer two and one-half inch (2 and ½”) Bituminous concrete:

   at intersections along the roadway the distance of the arcs of the curves plus a straight section at each end of eight feet (8’). Granite curb shall be type SB sloped edging. (Subsection M9.04)

   along each edge of a roadway where the grade exceeds five percent (5%).

   on the inner side of all curves with a radius less than two hundred and fifty feet (250’). The elevation of the curb shall be seven inches (7”) higher than the gutter line.

   b) In the event that the Planning Board waives curbs and berms, eighteen inch (18”) flat berms as above shall be provided along each edge of the roadway where the grade exceeds three percent (3%).

Commentary: Consider not requiring a waiver when open section road design is proposed for stormwater management rather than curb and gutter.
c) The profile of the berm is subject to Planning Board approval.

7. **Curbs Cuts.**

   a) Driveways shall be at least ten feet (10’) wide and have a curb return at the roadway of three feet (3’) in radius.

   b) Where rolled curbs or no curbs exist, the driveway flare should have a three foot (3’) radius. Driveway cuts shall not be within sixty-five feet (65’) of the intersection of the center line of intersecting streets.

   c) Driveways shall slope down from the edge of the street right-of-way to the edge of the street pavement at a grade of not less than one percent (1%) but not more than eight percent (8%).

8. **Sidewalks.**

   a) Sidewalks shall be constructed within the subdivision.

   b) The sidewalks shall extend the full length of the street and shall be of the following widths:

<table>
<thead>
<tr>
<th>Along all Streets</th>
<th>Five feet (5’)</th>
<th>On one side</th>
</tr>
</thead>
</table>

   Except around a cul-de-sac a sidewalk need be provided on one (1) side only, the exterior side.

   c) Bituminous concrete sidewalks shall have a minimum thickness of two 1.1/2 courses each after compression.
9. **Embankments.** Outside the right-of-way embankments shall be evenly graded and pitched at a slope of not greater than 3 horizontal to 1 vertical in fill. Where cuts are made in ledge, other slopes may be determined with the approval of the Planning Board. Where terrain necessitates greater slopes, retaining walls, terracing, fencing, or rip-rap may be used either alone or in combination to provide safety and freedom from maintenance, but must be done in accordance with plans filed with and approved by the Planning Board.

Whenever embankments are built in such a way as to require approval by the Planning Board, the developer must furnish to the Town duly recorded access easements free of encumbrances for maintenance of the slopes, terraces or retaining walls. All such slopes shall be grassed in accordance with the specifications for the area between the roadway and sidewalk or roadway and boundary of the right-of-way.

C. **Utilities**

1. **Excavation.** Excavation for structures, including foundation for drains and water pipes, walls and other structures shall be made to the depth as indicated on the Definitive Plan or established by the Highway Surveyor.

2. **Installation.** All stormwater drain, sewer, gas and water pipes, underground utilities, and other structures shall be installed upon the completion of roadway subgrade and before the placing of the sub-base, gravel base course, sidewalks or pavement.

   a) **Water Facilities-Installation.** Water mains, with hydrants, valves and other fittings, shall be constructed and installed within the subdivision as necessary to provide to all lots therein adequate water supply for domestic and fire protection use. Proper connections shall be made with existing public water systems. Where property adjacent to the subdivision is not
subdivided, provision shall be made for proper projections of the systems by continuing appropriate water mains to the exterior boundaries of the subdivision, at such size and grade as will allow for the projections, except that the installation of water mains for these projections will not be required where their location is outside paved areas.

b) Water Supply. Potable water of quality and quantity acceptable to the Board of Health for domestic use, and fire protection water with a minimum open hydrant flow of 500 gallons per minute shall be provided in each subdivision, at minimum residual pressure of 20 pounds per square inch. Water lines shall be at least 6-inch diameter cement-lined cast iron, 150-pound class or equivalent, and shall be furnished with adequate valves and appurtenances to the specifications of the Town. Whenever possible, water pipes shall be extended and connected to form a loop, if need be using easements across lots. Where no municipal water supply is available within a reasonable distance of the subdivision, the Board will not approve a subdivision plan unless adequate groundwater supply is available at the site, in the opinion of the Planning Board acting with the advice of the Board of Health.

c) Gas mains shall be installed if gas connection is available unless said installation is specifically waived by the Planning Board.

d) Telephone lines shall be installed in underground conduits in conformity with Section 390 of the Standard Specifications. Electric lines shall be installed underground in accord with the regulations of the Massachusetts Electric Company. Cable television lines, when provided, shall also be installed underground.
3. On-site sewage disposal facilities shall be installed and constructed in conformity with the rules, regulations and requirements of the Board of Health. On-site septic tanks and leaching fields may be located in the front side or rear yard of the building(s) served, with the front yard preferred. Due consideration should be given to surface and sub-surface soil conditions, drainage and topography in the location of such on-site facilities, and in no instance can any portion of the sewage disposal facilities be located closer than twenty feet (20’) to a property line.

4. Where adjacent property is not subdivided or where all the property of the applicant is not being subdivided at the same time, provision shall be made for the extension of the utility system by continuing the mains the full length of streets and to the exterior limits of the subdivision, at such grade and size which will, in the opinion of the Planning Board, permit their proper extension at a later date.

Commentary: The following text is provided as a proposed revision of the Drainage and Runoff Control section (Section IV.D) of the Town of Lakeville Planning Board Subdivision Regulations. We have tried to add clear, specific standards to help both developers and town officials determine project compliance with updated stormwater standards. The section has been revised to include recommendations/requirements from the Massachusetts Stormwater Management Standards (MASWMS).

D. Drainage and Runoff Control Stormwater Management

1. General Requirements. Approval of subdivision plans may be denied until the Planning Board is assured that either the proposed subdivision will not result in a significant increase in the rate and volume of storm water runoff over natural or existing conditions or that adequate provisions will be taken to maintain the volume and rate of runoff at its natural or existing level meet the Massachusetts Stormwater Management Standards (MASWMS) as stated in the Massachusetts Stormwater Handbook. The objective of this regulation is...
to maintain existing groundwater recharge at the site and prevent stormwater discharges from creating water quality (pollutants) and quantity (erosion and flooding) problems in the Town. Stormwater discharges from the integrity of natural drainage patterns, in order to provide adequate storm water drainage, prevent flooding, and avoid alteration of existing stream channels.

**Commentary:** The changes in this section reflect the evolution of managing runoff from a site. In the past, the main focus was solely on conveying stormwater runoff away from the site, while preventing downstream flooding issues. Currently, projects should consider recharge and water quality issues as well as storage.

2. **Procedure.** (May be modified by the Planning Board to suit the problems and needs of a particular subdivision.)

   a) A stormwater report describing how each of the ten stormwater standards from the MASWMS is met shall be submitted along with all necessary supporting data and calculations. Pre- and post-development drainage area maps that include design study points, soils, and times of concentration shall be included. The NRCS models TR-55 and TR-20 (or approved equivalent) should be used for determining the required storage and outlet structures for attenuating the peak flows from the design storms. Applicants shall also show how they have utilized LID techniques to the maximum extent practicable. An estimate of the present rate and volume of runoff, as well as an estimate of the rate and volume of runoff that would occur from the proposed subdivision, shall both be submitted along with supporting data. The runoff calculations shall be developed using the “Modified Soil Cover Complex Method” described in Guidelines for Soil and Water Conservation in Urbanizing Areas of Massachusetts, Appendix B, published by the Soil Conservation Service. These calculations shall be on the basis of runoff produced from a 100-year storm event. In calculating runoff and drainage requirements, the developer shall consider the impact of septic systems on the ability of the soil to absorb additional
storm water, as well as any upstream runoff which may impact on the subdivision.

Commentary: We recommend revising this section as shown above to require the relevant data and calculations to demonstrate to the Board that all of the standards have been met by the proposed project.

b) The developer shall meet the required standards by using the approved best management practices, and associated design criteria, in the MASWMS. In order to control the rate and volume of storm water runoff from the development site, the developer may elect to do so through any method which can be demonstrated to control the required amount of runoff, to the satisfaction of the Planning Board or the Board’s agent. In each instance, the method or methods elected shall be suitable to the site and subject to the approval of the Planning Board.

Commentary: This section should be revised to specifically reference the approved best management practices (BMPs) and associated design criteria in the MASWMS.

c) The system may make use of gutters, inlets, culverts, catch basins, manholes, subsurface piping, surface channels, natural waterways, and detention basins, open or stone-filled. The Board will not approve any design or component which in its opinion does not meet the standards of engineering practice, will not function without frequent maintenance, or is unsuited to the character of the subdivision.

Commentary: This section is not necessary if the above revisions are incorporated.

d) If a curb-and-gutter system is proposed, in general, the design of pipes shall be such as to provide for a flow of water at speeds between two (2) and twelve (12) feet per second; the minimum grade shall be not less than 0.4 percent for pipes twelve inches (12") and less in diameter, and 0.25
percent as absolute minimum; the minimum pipe diameter shall be twelve inches (12”), except that smaller ten-inch (10”) pipe may be used to connect a single catch basin across the street or to divert runoff from small storm events to off-line BMPs; catch basins shall have a four foot (4’), two and one half feet (2.5”) sump below invert; and all drop manholes or inlets with a drop of six feet (6’) or more shall be provided with a splash pad. Catch basins or inlets, if necessary, shall be spaced along both sides of a street at approximately 400 feet intervals, and located at all low points and corner roundings at street junctions.

**Commentary:** This section should be revised to allow flexibility for LID open-section roadways and smaller pipe sizes for off-line stormwater BMPs (e.g., bioretention sized to treat only the first inch of runoff).

e) Streets shall be graded to provide for expeditious runoff of water, except that settling basins or other means of removing pollutants shall be used in draining large parking areas or streets subject to heavy traffic or other sources of pollutants. Roof drains shall not be connected to the drainage system, but shall be managed on each lot to the maximum extent practicable. No industrial or domestic waste shall be discharged to or allowed to enter storm drains.

**Commentary:** This section should be revised to reflect the more recent shift from moving stormwater away from a site as quickly as possible – years of research have shown that this method creates downstream water quality and quantity problems. The idea of LID is to incorporate small-scale BMPs throughout a site near the source of runoff to slow down runoff, remove pollutants, recharge groundwater, and greatly reduce flooding and erosion. In addition, roof drains should not be connected to the drainage system, but should be addressed on each lot with drywells, rain gardens, or directed to pervious areas.

f) Storm drains and retention basins shall be designed based on a twenty-five year frequency storm, and cross culverts shall be based on a twenty-five year frequency storm. All storm water shall pass through an oil...
separator manhole prior to outfall. The manhole shall have convenient access. Prior to discharge, all storm water shall pass through a sedimentation basis capable of removing 80 percent of the waterborne sediment. All storm water shall be conveyed in ditches or storm drain lines to storm water detention retention basins capable of recharging the ten-year event, or to permanent streams. Permanent easements and provisions for vehicular access shall be provided along the entire length of the stormwater management system ditches and storm drain lines. No increase in storm water runoff over pre-development conditions will be permitted for up to the twenty-five year event. Evidence of this shall be submitted to the Planning Board in the form of calculations for pre-development versus post-development for all channels leaving the site, and any other design points required by the Board.

Commentary: This section should be revised as shown to be consistent with the MASWMS as already stated above.

g) The basis for hydrologic and hydraulic evaluation of subdivision sites are as follows:

1. Impervious cover is measured from the site plan and includes any material or structure on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved parking lots, sidewalks, roof tops, driveways, patios, and paved, gravel, and compacted dirt surfaced roads. Alternative surfaces (e.g., porous pavement, grass pavers, etc.) are encouraged for low-traffic sidewalks and driveways, and these areas may be removed from the total impervious area calculations when designing the stormwater system for recharge and water quality criteria only. General design guidance is included in the MASWMS, but there is not one set of required design criteria since alternative
paving technology is still evolving and improving. Thus, the applicant shall submit specifications for any proposed alternative surfaces, which shall be reviewed by the Board on a case-by-case basis.

2. Off-site areas draining to the site shall be included in the hydrologic and hydraulic analyses.

3. The models TR-55 and TR-20 (or approved equivalent) shall be used for sizing stormwater practices.

4. The length of sheet flow used in the TR-55 method for time of concentration calculations is limited to no more than 100 feet for pre-development conditions and 50 feet for post-development conditions.

5. For purposes of computing runoff, all pervious lands in the site prior to development shall be assumed to be in good condition regardless of conditions existing at the time of computation.

6. The Rational Method will be used for drainage conveyance calculations needed to size components of the selected drainage conveyance system.

7. The specified design storms shall be defined as 24-hour, Type III distribution design storm events using the rainfall amounts specified for Plymouth County in the *Hydrology Handbook for Conservation Commissioners*.

Subdivisions shall apply these stormwater management criteria to the land development as a whole. Hydrologic parameters shall reflect the ultimate land development and shall be used in all engineering calculations.

Commentary: This section should be added to ensure consistency in submitted calculations.

3. Final Approval. Where runoff detention features are required, A proposed development shall in no case receive final approval until the site has been
inspected by the Planning Board or the Board’s agent to ensure that detention facilities the stormwater management system has been installed as proposed in the Definitive Plan.

4. Lot Drainage. Lots shall be prepared and graded in such a manner that development of one shall not cause detrimental drainage on another; if provision is necessary to carry drainage to or across a lot, an easement or drainage right-of-way of a minimum width of twenty feet (20’) and proper side slope shall be provided. Storm drainage shall be designed in accord with the specifications of the Board. Where required by the Planning Board or the Board of Health, the applicant shall furnish evidence that adequate provision has been made for the proper drainage of surface and underground waters from any lot or lots. Storm water shall not discharge overland across lot lines. Drainage conveyances and easements shall be provided to convey stormwater to the nearest permanent stream or municipal drainage system.

5. Construction. Stormwater Drainage facilities shall be provided as indicated on the plan and in conformity with the requirements of Sections 200, 220, and 230 of the Standard Specifications.

Commentary: The relevant specifications should be reviewed for consistency with these revisions.

The standard depth of catch basins shall be four feet (4’) two and one-half feet (2 \(\frac{1}{2}\)) below the invert of the outlet. Manholes shall be constructed to the required depth at each junction point and as shown on the plan. Pipe culvert and pipe drains shall be in conformity with the requirements of Section 230 for installation of pipes.

Commentary: Deep-ump catch basins used as a pretreatment measure require a 4-foot sump below the invert of the outlet – this section should be revised to allow for this practice.
All drain pipes except sub-drains shall be reinforced concrete pipe and shall be installed according to the size as shown on the plans. No backfilling of pipes shall be done until the installation has been inspected by the Planning Board’s Agent. All drainage trenches shall be filled with clean gravel borrow in accordance with Section 150.

Commentary: Consider allowing flexibility with the pipe material - HDPE pipes can offer flexibility and cost savings, without reducing performance.

Where sub-drains are required they shall be constructed in conformance with Section 260 of the Standard Specifications (Mass. DPW specs). Such sub-drains may be required by the Board following clearing and grubbing operations. No drainage pipes from roof drains, driveway drains, or other on-lot sources shall be connected to the street drainage system without the explicit approval of the Planning Board. Cast iron manhole covers and catch basin grates shall be as manufactured by or equivalent to E.L. LeBaron Foundry Model No.’s LK-110 for manholes, L.F. 248-2 for catch basins or for catch basins at the end of or on 5% gradient roads No. LK-120A (Cascade Grate).

E. Open Space

Before approval of a plan the Planning Board may also, in proper cases, require the plan to show a park or parks, suitably located for playground or recreation purposes or for providing light and air and protecting natural hydrology. The park or parks shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of land. 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. Pedestrian ways, hike ways, or bridle paths of not less than fifteen feet (15’) in width may be requested where deemed desirable to provide circulation or access to schools, playgrounds,
parks, shops, transportation, open spaces and/or community facilities. Each area reserved for such purpose shall be of suitable area, dimensions, topography and natural character for the purposes of a park and/or playground. The area or areas shall be so located as to serve adequately all parts of the subdivision as approved by the Planning Board. The Planning Board may require that the area or areas reserved shall be located and laid out so as to be used in conjunction with similar areas of adjoining subdivisions or of probable subdivisions. Unless otherwise specifically approved by the Planning Board, the total amount of area to be reserved for park and/or playground purposes shall be no less than five percent (5%) of the gross area of the subdivision with a minimum of one acre when ten or more lots. Any land so reserved shall be included in the stormwater management system or completely protected during construction to protect the natural hydrology, depending on the ultimate purpose of the open space. The reserved land shall be left in condition for the purpose intended, as required by the Planning Board.

Commentary: Consider encouraging the preservation of natural open space that is completely protected during construction, particularly areas contiguous with buffers to jurisdictional wetlands.

F. Easements

1. Where utilities cross lots or are centered on rear or side lot lines, easements shall be provided of a width of at least twenty feet (20’).

2. Where a subdivision is traversed by a water course, drainage way, channel or stream, the Planning Board may 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 feet (20’) wide.

4. General, access, drainage, or utility easements shall not be included in the lot area.

G. Monuments

1. Monuments shall be installed on street lines at all points of curvature, at all points of change in direction, at each point where the lot line intersects the street right-of-way, and at all other points where, in the opinion of the Planning Board, Permanent monuments are necessary.

2. Monuments shall be a standard permanent granite or reinforced concrete marker of not less than three feet (3’) in length and not less than five inches (5”) in width and breadth and shall have a three-eighth inch (3/8”) drill hole in the center of the top surface. Said monuments shall be installed at the time of final grading with the top flush with top final graded surface. At each point where the lot line intersects the street right-of-way shall be a pipe or steel rod three feet (3’) in length.

3. The placement and accurate location of these markers shall be certified by a registered land surveyor and properly located on the street acceptance plans.

H. Street Signs and Names

1. Street signs shall be installed at each intersection to conform to the standard established by the Highway Surveyor.
2. Street names shall be approved by the Planning Board to prevent duplication and to provide names in keeping with the character of the Town.

3. From the time of rough grading until such time as each street is accepted by the Town as a public way, the sign posts at the intersection of such street with any other street shall have affixed thereto a sign designating such street as a private way.

I. Street Lights

1. Street lights shall be installed to conform to the type and style in general use in the Town of Lakeville unless otherwise specified by the Planning Board.

2. Street lights shall not be nearer than twenty-five feet (25’) from the intersection of two (2) streets, measured from the intersection of the tangents of the intersecting street curb lines; and shall be placed in back of sidewalks wherever possible.

3. Street lights shall be installed in accord with the procedure required by the Board of Selectmen and the applicable utility company.

J. Utility Poles

Utility poles, hydrants, and street shade trees shall not be nearer than twenty-five feet (25’) from the intersection of two (2) streets, measured from the intersection of the tangents of the intersecting street curb lines; and shall be placed in back of sidewalks wherever possible.

K. Trees
1. Where reasonable deciduous street trees shall be planted on each side of each street in a subdivision, except where the Definitive Plan showed trees to be retained which are healthy and adequate. Such trees shall be located outside of the right-of-way as shown in the Profile and Standard Cross Sections Schedules A and B, approximately at forty foot (40’) intervals, and shall be at least twelve feet (12’) in height, two inches (2”) in caliper measured four feet (4’) about the approved grade, and shall be planted each in at least one-half (½) cubic yard of topsoil unless otherwise required by the Tree Warden.

2. The developer shall plant other trees as needed to provide at least one (1) area of shade to each lot.

3. All deciduous street trees shall be clear of any branches from the approved grade level to a point seven feet (7’) above ground level.

4. The developer will be liable for all trees so planted as to their erectness and good health for one (1) year after planting.

5. No evergreen trees such as pine, fir, spruce or hemlock are to be planted on an easterly or southerly side of a road, street or way.

6. All cut bankings that tend to wash or erode must be planted with a low growing evergreen shrub such as laurel, mugho pine or juniper, and seeded with a deep rooted perennial grass to prevent erosion.

L. Protection of Natural Features

Due regard shall be shown for all natural features, such as mature large trees, wooded areas, water courses, scenic points, historic spots, and similar community assets, which, if preserved, will add attractiveness and value to the subdivision.
Outside of street right-of-ways, no trees over a twenty-four inch (24") caliper measured at four feet (4’) above the existing grade shall be removed or have the grade level surrounding the trunk altered by more than six inches (6") without approval of the Planning Board.

M. Maintenance of Improvements

For the purpose of protecting the safety, convenience and welfare of the Town’s inhabitants; for the provision of adequate access to all of the lots in a subdivision by ways that will be safe and convenient for travel; for reducing the danger to life and limb in the operation of motor vehicles; for securing safety in the case of fire, flood, panic and other emergencies; under the authority of Chapter 41, Section 81-M as amended, the applicant or his successor shall provide for the proper maintenance and repair of improvements under this Section of the Rules and Regulations during the construction and for the period of twenty-four (24) months after the completion of the construction of said improvements or until the Town votes to accept such improvements, whichever comes first. Such maintenance shall include snow removal beginning from the time of occupancy of an individual owner or tenant other than the developer.

N. Erosion and Sedimentation

1. General Requirements. These requirements may be waived. However, in a subdivision with excessive slope or a subdivision which abuts or includes a stream(s), wetlands or pond(s), or where major earth work is anticipated, an erosion and sedimentation analysis shall be presumed necessary unless a waiver is received. Approval of a subdivision plan may be denied until the existing average annual erosion and the expected average annual erosion during and after construction is determined. The developer may be required to submit an erosion and sediment control plan, if based on the analysis of
erosion potential the Board determines that sedimentation will have an impact on nearby wetlands, streams, ponds, and other water bodies. An Erosion and Sediment Control Plan shall be provided in accordance with Standard 8 of the MASWMS.

2. Procedure. (May be modified by the Planning Board to suit problems and needs of a particular subdivision.)

a) Using the methods described in Guidelines for Soil and Water Conservation in Urbanizing Areas of Massachusetts, Appendix J, published by the Soil Conservation Service, the developer shall use the Universal Soil Loss Equation to estimate the present annual soil loss from the site, as well as the estimated annual soil loss from the site while under construction and after construction is completed.

b) The developer shall submit as part of the Definitive Plan a soil erosion and sedimentation control plan, if the Board determines that erosion due to development activity will be excessive or significant to wetlands, streams, ponds, or other water bodies. This plan shall consist of a drawing certified by a registered civil engineer, identifying appropriate control measures and their location. Also, the drawing shall show all natural drainage ways and water bodies in and adjacent to the proposed subdivision. The drawing shall be at a scale of one inch (1”) equals forty feet (40’), and show the existing and proposed topography at five-foot (5’) contour intervals.

c) If erosion and sedimentation control measures are required, they shall be adequate to retain all erosion within the subdivision and away from nearby water systems, both during and after construction. A timetable outlining anticipated construction activity and associated erosion and sedimentation
control measures shall be submitted to the Board. All work shall be subject to periodic inspection by the Board or Board’s agents.

a) At a minimum, the Erosion and Sediment Control Plan shall comply with the performance standards of the most recent version of the Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials published by the Massachusetts Executive Office of Energy and Environmental Affairs (EEA), as well as the following:

1. Measures shall be taken to control erosion within the project area.

2. The removal of existing trees and ground cover is to be kept at a minimum.

3. Wetland areas and surface waters shall be protected from sedimentation.

4. Sediment in runoff water shall be trapped and retained within the project area. All temporary sediment trapping devices shall be designed to retain 1 inch of runoff from the contributing drainage area.

5. All construction site measures shall be designed to accommodate (safely convey without creating erosive conditions) the 10-year, 24-hour return frequency storm event.

Commentary: Consider revising the above section to meet Standard 8 of the MASWMS and effectively address ESC issues during construction.

SECTION V – ADMINISTRATION
A. Variation

Strict compliance with the requirements of these rules and regulations may be waived when, in the judgment of the Planning Board such action is in the public interest and not inconsistent with the Subdivision Control Law.

B. Reference

For matters not covered by these rules and regulations, reference is made to Section 81-K to 81-GG, inclusive, of Chapter 41 of the General Laws.

C. Building Permit

1. No building shall be erected within a subdivision without written permission from the Planning Board by release of covenant, bond, or securities resulting from the fulfillment of developed obligations.

2. The Building Inspector shall not issue any permit for the erection of a building until he is first satisfied that the lot on which the building is to be erected is not within a subdivision or that a way furnishing the access to such lot as required by the subdivision control law is shown on a plan recorded or entitled to be recorded under Chapter 41 Section 81-X, as amended and that any condition endorsed thereon limiting the right to erect or maintain buildings on such lot have been satisfied or waived by the Board, and in the event that more than one building for dwelling purposes be erected or placed or converted to use as such on any lot, that the Building Inspector is satisfied that consent has been obtained from the Planning Board in accord with Section II-D of these Rules and Regulations, Chapter 41 Section 81-Y, and amendments thereto.
D. Inspection Notices

The subdivider shall notify the Highway Surveyor and the Engineer designated by the Board at least 48 hours prior to the time at which each one of the required inspections should take place. The subdivider shall provide safe and convenient access to all parts of work for inspection by the Highway Surveyor and by the Board’s engineer, members or agents. No work shall be approved that has been covered before the required inspection.

To assure compliance, the following procedure must be followed:

1. The developer must notify the Highway Surveyor and the engineer designated by the Board in writing of the start of construction.

2. The developer must notify the Highway Surveyor and the engineer designated by the Board when underground utilities and drainage are installed in order that inspection may be carried out before any backfilling is done.

3. The subgrade must be approved by the Highway Surveyor and the engineer designated by the Board before the application of the gravel base course.

4. The gravel base course must be approved by the Highway Surveyor and the engineer designated by the Board before the application of bituminous concrete (street or sidewalk).

5. The developer must notify the Highway Surveyor and the engineer designated by the Board at the start of each application of bituminous concrete on the street and sidewalk and of placement of curbing.
6. The developer must keep the Highway Surveyor and the engineer designated by the Board informed when materials and other items of work are ready for inspection such as the installation of bounds, loam and seeding, and general cleanup.

7. Occupancy permits will not be issued until street signs have been erected.

E. Validity

If, in any respect, any provision of these Rules and Regulations in whole or in part, shall prove to be invalid for any reason, such invalidity shall only affect the part of such provision which shall be invalid and in all other respects these Rules and Regulations shall stand as if such invalid provision of these Rules and Regulations shall be invalidated, impaired, or affected thereby.