ATTORNEY DONOVAN'S

"WHITE PAPER"

RE: REVIEW OF LDR's

February 22, 2022

REDACTED VERSION

June 7, 2022

Note: Unless otherwise indicated suggested new language is ***emboldened and italicized***. Deleted language is ~~struck through~~.

ARTICLE I – INTRODUCTION

1. § 202-1.4, B. Re: Building Inspector – Suggest amending as follows:

> B. Building Inspector. The Building Inspector shall not issue a building permit for any new buildings or structures; additions, modifications, or alterations of buildings or structures; or replacement of buildings or structures unless all applicable approvals required by these regulations have been granted by the Planning Board. The Building Inspector shall not issue an occupancy permit for a dwelling unless all street construction***, drainage and site work have been substantially completed to the satisfaction of*** ~~has been completed and approved by~~ the Planning Board Engineer. ***Building permits and occupancy permits shall not be issued if violations of the zoning ordinance, these regulations or the planning board's approval exist on the lot.***
>
> *Explanation. The amendment strengthens the board's ability to enforce compliance with its approvals.*

2. § 202-1.9. General Waiver Authority.

> Right now waivers are limited to circumstances where strict conformity would pose an unnecessary hardship to the applicant and waiver would not be contrary to the spirit and intent of the regulations.
>
> Review whether the regulations should also include the second allowed reason for a waiver: Specific circumstances relative to the subdivision or conditions of the land indicate that the waiver will properly carry out the spirit and intent of the regulations.

3. § 202-1.13 Definitions.

> ABUTTER. Add statutory language on notice to condominiums and manufactured housing parks to definition.

ARTICLE II – TYPES OF LAND DEVELOPMENT.

4. § 202-2.1, B (5). Re: Multi-Family Developments. Amend as follows:

> (5) Multifamily residential developments are developments that ~~create~~ ***construct*** a residential building(s) containing three or more dwelling units.

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> REDACTED

ARTICLE III – APPLICATION PROCEDURES & SUBMITTAL REQUIREMENTS

5. § 202-3.2, C (2) (a). Preliminary Conceptual Consultations.

   Why require only 3 copies of a sketch plan for a site plan review where 10 are required for a conceptual consultation on a subdivision proposal?

6. § 202-3.3 A (1). Design Review.

   Amend "Purpose" to conform to statutory language.

   1. Design reviews are for the purpose of providing preliminary guidance to applicants on matters that go beyond the "conceptual" level of preliminary consultation. Design reviews are intended to address specific ~~situations where resolutions of matters of a "threshold" nature will affect the future design of a proposal or, possibly, its viability.~~ ***design and engineering details.***

7. § 202-3.3, A (2). Design Review.

   SENTENCE REDACTED

   2. Guidance provided at design reviews shall be advisory only and nonbinding to both the applicant and Planning Board. The design review process is not a substitute for formal, final application. ~~Any applicant who receives a discouraging design review shall complete a second design review to address the Board's concerns before proceeding with final application for approval.~~

8. § 202-3.4, E. Re: Submittals for Major Subdivision Applications

   After E (3) add the following submittals and re-index accordingly.

   (4) Landscaping Planting Plan required by § 202-11.4. The Landscaping Planting Plan shall provide all of the information necessary to demonstrate compliance with the standards of § 202-11.1 to § 202-11.3.

   (5) Plant Maintenance Plan required by § 202-11.5, A for all landscaped areas to be maintained by a homeowners association, condominium association or similar entity.

   (6) The Assessment of Complete Street elements required by § 202-6.2, B (8) (d).

(7) A determination of whether the development or any portion of the subject parcel(s) is located within projected high-risk flood areas as shown on the Tide to Storm Vulnerability Assessment Maps. See § 202-6.9, C (2).

Explanation. This will place all submittal requirements in one place in the regulations. It also corrects a drafting/structural oversight where there is no actual requirement that some plans be submitted.

9. § 202-3.5, B. Re: Submittals for Major Site Development Applications.

Add above 4 items to required submittals. Also add a requirement for a lighting plan.

A Lighting Plan providing all the information necessary to demonstrate compliance with the standards of Article X, including: [see suggestions from Dark Sky Society – Exhibit 1 hereto].

10. § 202-3.4, E (4) Site Impact Analysis for Major Subdivisions

Rewrite requirements for Site Impact Analysis to require that it include a review of the Natural Resource Maps and Study and that it address the natural resources on the site including, if applicable, submittal of a plan depicting the specific natural resources found on the site.

11. § 202-3.5, B. Submittals for Major Site Development Applications.

Add a provision requiring a Site Impact Analysis.

Explanation. When original LDR's were prepared in 1988 multi-family housing was not allowed in Rye. Zoning amendments since which allow multi-family housing (Washington Green, THP, Hectors, Ciborowski) and the redevelopment of tourist accommodation site (i.e. Samonas) have resulted in Major Site Development Applications for which a Site Impact Analysis should be a requirement.

ARTICLE IV – Recommend Change Title To: APPLICATION REVIEW PROCEDURES.

12. § 202-4.1, J. Re: Resubmittal of Applications.

Add the requirement which is well-established by case law that an application which has been denied may not be resubmitted unless it differs in material degree from the denied application or there has been a material change of circumstances. See *E.g. Fisher v. Dover*, 120 N.H. 187, 417 A.2d 1024 (1980).

Resubmittal. The Planning Board shall not accept resubmittal of a disapproved application or an application essentially the same as a disapproved application unless the defect(s) that formed the basis for disapproval has been cured or unless these regulations have been amended in a manner that eliminates the defect(s). ***An***

application which has been disapproved may not be resubmitted unless it differs in nature and degree from the disapproved applications or absent a material change in circumstances. See E.g. Fisher v. Dover, 120 N.H. 187, 417 A.2d 1024 (1980).

13. § 202-4.3 Re: Vesting

Approved applications may be vested ~~All applications for site plan review and subdivision of land shall be~~ in accordance with the requirements of RSA 674:39.

Explanation. The above change is a more precise way of wording the vesting provision because an application may not be vested if the statutory requirements are not met.

ARTICLE VI – LAND DEVELOPMENT STANDARDS

14. § 202-6.2 (A) (2) Re: Lot Arrangement

Consider adding the following which the statutes now allow:

(c) In order to encourage the use of solar, wind or other renewable energy systems and protect access to energy sources the planning board may regulate the orientation of lots and buildings.

15. § 202-6.2, B (7) (d). Re: Location of Driveways

Consider revising to read as follows:

(d) Driveways. ***On a new street*** ~~*Dd*~~riveways shall not be located within 100 feet of a street intersection. **New street intersections shall be located a minimum of 50 feet from existing driveways unless the existing driveway is to be discontinued.** The Planning Board may specify driveway locations on a street in order to assure safe entry and exit.

Explanation. This provision has been problematic a few times in the past with respect to existing driveways being too close to proposed intersections.

16. § 202-6.2, F. Re: Off-Site Improvements.

Review this and § 202-6.3, G for consistency.

- Major Subdivisions: Why is the connection requirement for water lines 1000 ft. and sewers only 500 ft.?
- Why is the requirement for connection of water lines to major site developments 500 ft. whereas the requirement for a major subdivision is 1000 ft.?

- BULLETED COMMENT REDACTED.

Explanation. These should be reviewed because multi-family land developments must comply with the major site development requirements. As is noted elsewhere, when the LDR's were adopted in 1988 multi-family developments were not allowed in Rye.

17. § 202-6.4,H. Surface Paving Course (Escrow Provision). Amend as follows:

H. Surface pavement course. The surface course shall not be placed by the developer until building development on all lots in the subdivision is substantially complete as determined by the Public Works Director.

(1) If all other improvements are complete, the Planning Board may release surety in accordance with § 202-7.1, provided that the developer places an amount in escrow which is sufficient to pay for surface paving. Said amount shall be determined by the Public Works Director and approved by the Selectmen and Planning Board and agreed to by the developer.

(2) However, if the escrow proves to be insufficient for any reason whatsoever, the developer shall be responsible for paying any excess costs. Surety for any excess cost shall be provided as part of the maintenance surety required by § 202-7.1.

(3) Under no circumstances will surface paving by the Town be commenced until such time as the ~~Rye Town Meeting~~ ***select board*** has accepted ownership of the street ***after a public hearing pursuant to RSA 674:40-a and Article 20 of the 2021 Annual Town Meeting***.

Explanation. The Town's approval of Article 20 eliminates the need for a town meeting to vote on acceptance of town streets. That power now lies with the select board.

18. § 202-6.7. Re: Soils Based Lot Sizing.

Recommend that the board review the objectives of this section with a soils scientist. The cited publication does not contain any minimum soils based lot sizing requirements. It is a technical manual on how soils surveys should be performed and portrayed.

The LDR's adopted in 1988 contained soils based lot sizing based on HISS standards. The HSS Standards Table (Revised 12/92) were in the LDR's but they are not in the revised LDR's adopted in 2020.

It is beyond the scope of my work and my limited knowledge of soils surveys to take this further. I suggest the board work with a soils scientist to understand how minimum lot sizing requirements based on soils can be included in the LDR's and then determine if it is advisable to do it.

That being said, I wonder if the entire concept should just be scrapped. The minimum lot size is now 66,000 sf. Most of Rye is now served by public water which allows an automatic reduction of 20% in the soils based lot sizing requirements. Also, wetlands may contribute towards the minimum lot size. Although 25 years of reviewing subdivision proposals in Rye (since 1988) is a long time to test my memory, I do not recall any circumstance where the HISS standards were applied to require a lot greater than 66,000 sf.

19. § 202-6.8, B (1). Re: Wetlands. Delete it. REDACTED SENTENCE.

~~Where a subdivision plan has already been approved and recorded, but where the land remains essentially in its natural state, such subdivision plans are hereby null and void for that area lying in the Wetland Conservation District and shall be resubdivided only in accordance with Subsection B(2) below.~~

20. § 202-6.8, C (1). Re: Woodlands and Trees.

Consider amending to remove the provision which limits the tree retention to within the right-of-way.

1. ~~Within a proposed street right-of-way (ROW),~~ ***eE***xisting woodlands shall not be disturbed behind a line three feet from the back edge of the ditch line paralleling the street. Trees within existing Town rights-of-way shall not be disturbed without the specific approval of the Planning Board, which may require a suitable replacement.

21. 202-6.8, F. Re: Groundwater protections/lawn care and fertlizer

Consider adding the following:

Major subdivisions and major site developments located in the Aquifer and Wellhead Protection District shall comply with the guidelines in the May 2021 "Guidelines for lawns/turf areas for lawn care and fertilizer that protect water quality." See Appendix F.

22. § 202-6.9, C (4).

Review whether the requirement that the bottom of road base be 2 feet above SHWT applies everywhere in Rye or just within high risk flood areas. See emboldened sentence below. If it applies everywhere, it might be better relocated to the article on street construction standards.

4. Public, private and interior access roads. Finished road surfaces shall be constructed two feet above the mean higher high water elevation (defined as elevation 4.4 feet for the New Hampshire coast). **The bottom of road base (consisting of a six-inch crushed gravel base and eighteen-inch gravel base as depicted in Figure 1[11]) shall be constructed two feet above the current seasonal high water table.**

ARTICLE VII – CONSTRUCTION PERFORMANCE GUARANTEES & INSPECTIONS

23. § 202-7.2. Re: Compliance with approved plans. Amend as follows:

Construction shall comply with all land development plans and/or submittals that are part of the Planning Board's approval of a proposal. Final as-built plans must be submitted no later than two years from the completion of construction (per Section 2.3.6.b of the EPA MS4 permit, 2017).

Construction of a street in accordance with an approved subdivision plan and these regulations and subsequent approvals of the construction by the planning board engineer and planning board does not make the street a town street or guarantee that it will become a town street. In order for a street to become a town street it must be accepted by the select board after a public hearing and in accordance with RSA 674:40-a and Article 20 of the 2021 Annual Town Meeting.

Explanation. The above type language is recommended by both Loughlin, 16 N.H. Practice, Municipal Taxation and Road Law and Waugh, A Hard Road to Travel in order to protect against a subdivider who tries to force the town to accept ownership where the town meeting (or select board) has voted not to.

ARTICLE VIII – EROSION & SEDIMENT CONTROL STANDARDS

24. § 202-8.3. Inspection and Enforcement.

Delete this provision. It is unwieldy and not being followed. Inspection of erosion control measures by the planning board engineer takes place as part of his/her overall inspection duties as set forth in § 202 - 7.3.

~~The agent designated by the Planning Board shall make inspections as described below and shall either approve that portion of the work completed or shall notify the applicant/property owner and the Planning Board when and how the construction activity(s) fails to comply with the approved erosion and sediment control plan. All plans bearing the stamp of approval of the designated agent shall be maintained at the site during construction. In order to obtain inspections, the applicant/property owner shall notify the designated agent at least one week before the following required site inspections:~~

~~(1) Proposed erosion and sediment control measures are located and staked on the site before the start of construction.~~

~~(2) Erosion and sediment control measures are in place and stabilized.~~

~~(3) Site clearing and preparation has been completed.~~

~~(4) Rough grading has been completed.~~

~~(5) Final grading has been completed.~~

~~(6) Close of the construction season.~~

~~(7) Final landscaping has been completed.~~

ARTICLE IX – STORMWATER MANAGEMENT

25. § 202-9-3, B (3). Re: Water quality protection.

Consider the following to address the concerns expressed in review of the Nadeau Subdivision at 711 Long John Road that the requirement for groundwater recharge may result in every lot having its own bio-retention pond/rain garden at the expense of destruction of woodlands and natural terrain.

§ 202-9-3, B (3). Now reads:

3. On-site groundwater recharge rates shall be maintained by promoting infiltration through use of structural and nonstructural methods. The annual recharge from the post-development site shall maintain or exceed the annual recharge from pre-development site conditions. Capture and reuse of stormwater runoff is encouraged in instances where groundwater recharge is limited by site conditions All stormwater management practices shall be designed to convey stormwater to allow for maximum groundwater recharge. This shall include, but not be limited to:

(a) Maximizing flow paths from collection points to outflow points.

(b) Use of multiple best management practices.

(c) Retention of and discharge to fully vegetated areas.

(d) Maximizing use of infiltration practices.

(e) Stormwater system design performance standards.

Proposed Amendment.

It is preferred that groundwater recharge rates be maintained by promoting infiltration through the use of structural and non-structural methods. If possible to accomplish

without extensive alteration of the natural terrain and/or destruction of woodlands, the annual recharge from the post development site shall maintain or exceed the annual recharge from pre-development site conditions. BMP's such as drip edges, rain barrels, infiltration trenches, and vegetated buffers should be considered in lieu of retention facilities which extensively destroy woodlands or extensively alter the natural terrain. See also § 202-6.8, G. Stormwater management practices may include.

(a) Maximizing flow paths from collection points to outflow points.

(b) Use of multiple best management practices.

(c) Retention of and discharge to fully vegetated areas.

(d) Maximizing use of infiltration practices.

(e) Stormwater system design performance standards.

§ 202-6.8, G. Re: Groundwater Protection. (Standards for Preservation of Natural Features and the Environment).

Add following:

The groundwater recharge objectives of § 202-9.3 shall be balanced with the objectives of preserving woodlands and trees and minimizing the alteration of the natural terrain as the result of grading and filling.

26. Re: Design of Retention Facilities.

The old LDR's had one page of requirements for Surface Water Management at Section 604.2. Subsection 604.2, F required storm sewers and drainage facilities to be based on the 25 year/24 hr. storm. Holding ponds and the like were to be designed based on the 100 yr./24 hr. storm.

There are 11 pages of regulations of Stormwater Management in the new LDR's. Also, there are several incorporations by reference of the DES 2008 Stormwater Manual. This is highly technical and pretty much impossible for a non-engineer to understand and apply.

Planning Board Engineer Harding has confirmed my suspicion that the new LDR's have eliminated the requirement that holding ponds, detention basins and the like are no longer required to be designed to meet the 100 year storm. Apparently, the requirement is only a design based on the 50 year storm. It is suggested that the 100 year storm requirement be added back into the LDR's.

ARTICLE XI – LANDSCAPING STANDARDS

27. § 202-11.5, B. Re: Irrigation Systems

Consider adding new language applicable to Major Site Developments which, if irrigation systems are to be installed, requires a plan and conformance to the performance standards of the DES Model Water Efficient Landscaping Regulations. See Exhibit 2 hereto.

Attached: Exhibit 1: Dark Sky Lighting Plan Requirements
Exhibit 2: DES Model Water Efficient Landscaping Regulations

Lighting Plan Submissions

The following information needs to be provided to your municipality's review board which will enable them to evaluate the Site Plan for proper exterior lighting:

The Lighting Plan should be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture with projected hours of use. This plan will need to be stamped and certified by a licensed professional, such as an architect or engineer. Many lighting manufacturers can provide free photometric layouts on prepared site plans, to conform to your local requirements.

(1) The lighting plan should include the following information for all proposed and existing:
(2)

- Type and number of luminaire equipment (fixtures), including the "cut off characteristics", indicating manufacturer and model number(s).
- Lamp source type (bulb type, i.e. high pressure sodium), lumen output, and wattage.
- Mounting height with distance noted to the nearest property line for each luminaire.
- Types of timing devices used to control the hours set for illumination, as well as the proposed hours when each fixture will be operated.
- Total Lumens for each fixture, and total square footage of areas to be illuminated.
- For all plans of more than three fixtures: A Calculation Summary indicating footcandle levels on the lighting plan, noting the maximum, average, and minimum, as well as the uniformity ratio of maximum to minimum and average to minimum levels* to avoid "hot" spots of light.

(3) Lighting manufacturer-supplied specifications ("cut sheets") that include photographs of the fixtures; and for fixtures that are rated to exceed 2000 lumens, submit the certified BUG (Zero Up Light) designation for the fixture or fixtures.

(4) For a lighting design with multiple fixtures (e.g. parking lots and walkways) a Lighting Plan shall include light levels in footcandles on the ground at the designated mounting heights for the proposed fixtures. Maximum illuminance levels should be expressed in footcandle measurements on a grid of the site showing footcandle readings in five foot grids. The grid shall include light contributions from all sources (i.e. pole mounted, wall mounted, sign, and street lights.) Show footcandle measurements five feet beyond the property lines.

(5) If requested by the reviewing agency, a statement from a lighting design professional that a plan, other than that required is needed to meet the intent of these standards.

(6) An environmental impact statement may be required as to the impact of the exterior lighting proposed on adjacent preserves or waterways to include flora, fauna, and the night sky. Location of species sensitive to light at night or the proximity to nature preserves or astronomical observatories or "Dark Sky Parks", needs to be indicated.

(7) On the Approved Plan it should be noted that no substitutions, additions, or changes may be made without prior approval by the governing authority; and that all lighting not on the plan shall be removed and no additional lighting shall be installed without prior approvals.

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Model Water Efficient Landscaping Regulation for Municipalities

The Environmental Protection Agency (EPA) estimates that one-third of all residential water use is for landscape irrigation. New Hampshire's water use data shows that many water systems have a summer water demand that is twice the volume of winter demand, due in large part to lawn irrigation. This seasonal disparity continues to grow as many new residential developments include in-ground systems to irrigate lawns that have insufficient soils to retain moisture and support turf. In fact, discretionary use, such as lawn irrigation, is significant enough that many water systems must develop new sources in order to meet higher peak demands. Alternatively, some water systems resort to enacting watering restrictions and bans during summer.

Increasing summer water demand comes when there is naturally less water available in the environment due to warmer temperatures and plant uptake. As more water is used to irrigate lawns, less water is available to satisfy important environmental needs and other opportunities for beneficial use.

To assist municipalities, the following model regulation for landscape water efficiency was developed. The regulation recommends area limits for lawns, utilization of native plants, retention of mature trees, minimum loam requirements, and water efficiency provisions for in-ground irrigation systems.

MODEL REGULATIONS FOR WATER EFFICIENT LANDSCAPING FOR SUBDIVISION AND SITE PLAN APPLICATIONS

ARTICLE __: WATER EFFICIENT LANDSCAPING

I. PURPOSE

To protect, enhance and promote the economic, ecological and aesthetic environment by establishing water efficiency landscape elements to protect and conserve water resources while promoting the wise use thereof.

II. AUTHORITY

The provisions of this Article are adopted pursuant to RSA 31:39, Powers and Duties of Towns.

III. APPLICABILITY

A. The requirements of this section shall apply to all applications for the subdivision of land.

B. The requirements of this section shall apply to all applications for site plan review approval.

C. Exemptions: Subject to determination by the Planning Board, applications that meet both of the following criteria shall be exempt from the requirements of this section:

   i. Automatic irrigation systems are prohibited through a deed restriction from being installed on the lot or lots; and

   ii. The lot or lots have less than *Insert Number* square feet of landscape area.

IV. DEFINITIONS

A. **Artificially watered lawn:** Areas of grass that will receive artificial water to supplement precipitation.

B. **Deed Restriction:** A restriction on the use of land usually set forth in the deed for the property. A deed restriction is also sometimes referred to as a "restrictive covenant."

C. **Distribution Uniformity:** A measure of how uniformly water is applied to an area being watered, expressed as a percentage.

D. **Drought Tolerant or Drought Resistant:** A tree, shrub, or other plant that once established, will require limited or no regular irrigation for adequate appearance, growth and disease resistance.

E. **Ground Cover:** Low plants that generally form a continuous cover over time that are typically 3 feet or less in height.

F. **Invasive (Plant) Species:** Any plant species included on the most current list of prohibited invasive species prepared by the New Hampshire Invasive Species Committee in accordance with New Hampshire Agricultural Rule NH AGR 3800.

G. **Irrigation System:** An automated system of pipes, spray heads, and nozzles designed to artificially apply water to a landscape.

H. **Loam:** Loose friable topsoil that combines relatively equal parts of sand, clay, and silt and that is generally free from stones, lumps, stumps, roots, weeds, or similar objects larger than 2 inches.

I. **Landscape Area:** The designed area of landscape excluding the footprint of the home and permanent hardscape areas such as driveways, sidewalks and patios.

J. **Lower Quarter Distribution Uniformity**: The ratio of the average of the lowest 25 percent of uniformity measurements to the overall average distribution uniformity measurement.

K. **Microirrigation System:** The frequent application of small quantities of water on or below the soil surface as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line. Microirrigation encompasses a number of methods or concepts such as bubbler, drip, trickle, mist, or spray and subsurface

irrigation. For purposes of this regulation, microirrigation includes emission devices that have flow rates less than 30 gallons per hour.

L. **Maintain:** In reference to landscaping includes mulching, mowing, spraying, irrigating, fertilizing, propping, bracing, treating for disease or injury, snow removal, proper pruning techniques based on current arboriculture standards, and any other similar acts which promote the life, growth, health, safety, or beauty of the landscape vegetation.

M. **Mulch**: An organic material such as tree bark, wood chips, pine needles, leaf litter, grass clippings, or seed hulls used to control weed growth, reduce soil erosion and reduce water loss.

N. **Native (Plant) Species:** Plants that currently (or historically) grow as part of natural ecosystems that have co-evolved within the same planting zone.

O. **Overspray or Runoff:** Water that is not applied to or remains in the landscape area.

P. **Shrub:** A bushy, woody-stemmed plant, usually with several permanent stems usually less than 15-20 feet at maturity.

Q. **Site:** The area, lot, or lots upon which development is to occur or has occurred.

R. **Sprinkler Irrigation:** Type of irrigation-using mechanical devices with nozzles (sprinklers) to distribute the water by converting water pressure to a high velocity discharge stream or streams.

S. **Tree:** Any self-supporting woody perennial plant which normally attains an overall height of at least 10 feet at maturity, either with one main stem or trunk or multiple stems or trunks as commonly grown in the nursery industry.

T. **Vegetation:** Includes trees, plants, shrubs, vines, groundcovers, grasses, herbaceous perennials, or other forms of plant growth whether naturally occurring or planted.

U. **WaterSense:** An EPA-sponsored partnership program that seeks to protect the future of our nation's water supply by promoting water efficiency and enhancing the market for water-efficient products, programs and practices.

V. MINIMUM PLAN/PLANT REQUIREMENTS

A. Subdivision and site plan review regulations shall include:

   i. Location: Address or Map, Parcel, and Block Number

   ii. Landscape Design

      a. Total landscaped area in square feet.

      b. Total lawn area in square feet.

      c. Total irrigated area in square feet.

      d. List of tree and shrub plantings to be used.

e. Grass mix to be used.

iii. Irrigation System Details

a. Name of irrigation system designer.

b. Name of irrigation system installer.

c. Number of irrigation zones.

d. Number of irrigation heads.

e. Design flow rate of spray heads.

f. Proposed irrigation system controller and devices that will be used to prevent irrigation from occurring when it is not needed.

VI. SITE REQUIREMENTS

A. General Site Requirements

i. Site disturbance shall be minimized and existing vegetation and undisturbed soil shall be retained whenever possible. When site disturbance is necessary, top soil shall be stock-piled and stabilized for on-site redistribution within new landscaped areas. Stock-piled soil shall remain covered to prevent soil loss and sedimentation of nearby surface waters.

ii. Existing non-invasive vegetation shall be preserved wherever possible. Maximum effort should be made to preserve small stands of trees, rather than individual trees, to minimize the potential for damage due to wind, grade changes and soil compaction.

B. Artificially Watered Lawn Areas

i. All lawn areas to be artificially watered shall be underlain by no less than six inches of loam amended to consist of no less than 10 percent organic materials by volume.

ii. Water efficient grass mixes consisting of a minimum of two different grass species with three or more preferred shall make up the seed or sod. Mixes with a high percentage of fine fescues are preferred.

iii. Artificially watered lawns may comprise no more than 40% of the total landscape area.

C. Tree & Plant Areas

i. Trees and plants shall be selected based on consideration of site conditions as well as tree and plant function. Use of native species is encouraged; hybrid varieties that are non-native and non-invasive are permitted if they are drought tolerant and do not require supplemental irrigation after establishment. Use of invasive

species included on the N.H. Invasive Species Committee's most current list of prohibited invasive species is not permitted in accordance with New Hampshire Agricultural Rule NH AGR 3800.

ii. All exposed soils shall be covered and maintained with a two to three-inch layer of mulch.

D. Irrigation Systems

i. Irrigation systems are prohibited unless the guidelines established by this section are followed.

ii. Irrigation systems shall be designed and installed by an irrigation professional certified by the EPA's WaterSense Program. If three or less WaterSense certified irrigation professionals provide service to the area, a non-WaterSense certified irrigation professional may be utilized if permission is obtained from the Planning Board. EPA provides a list of certified partners by state.

iii. Irrigation systems shall be designed and installed to sustain the landscape without creating runoff or direct overspray during a minimum operating duration.

iv. Irrigation systems shall achieve a lower quarter distribution uniformity (DULQ) of 65% or greater. Distribution uniformity shall be measured on the largest spray-irrigated area.

v. Irrigation systems shall be equipped with technology that inhibits or interrupts operation of the irrigation system during periods of rainfall or sufficient moisture (e.g., rain sensors, soil moisture sensors).

vi. Sprinkler heads shall have a four inch or greater popup height and matched precipitation nozzles.

vii. Irrigation systems shall be equipped with irrigation controllers that contain the following features:

a. Multiple programming capabilities – shall be capable of storing a minimum of three different programs to allow for separate schedules.

b. Multiple start times – shall be capable of a minimum of three different start times to allow for multiple irrigation cycles on the same zone for areas prone to runoff.

c. Variable run times – shall be capable of varying run times (for example, one minute to a minimum of one hour).

d. Variable scheduling – shall be capable of interval scheduling (minimum of 14 days) to allow for watering on even day scheduling, odd day scheduling, calendar day scheduling, and interval scheduling.

e. Percent adjust (water budget) feature – shall include a "Percent Up/Down Adjust" feature (or "Water Budget" feature) such as a button

or dial that permits the user to increase or decrease the run times or application rates for each zone by a prescribed percentage, by means of one adjustment without modifying the settings for that individual zone.

f. Capability to accept external soil moisture and/or rain sensors.

g. Non-volatile memory or self-charging battery circuit.

h. Complete shutoff capability for total cessation of outdoor irrigation.

viii. Sprinkler type irrigation shall not be used on strips of grass less than 4 feet wide or on slopes in excess of 4 feet of horizontal run per 1-foot vertical rise (4:1).

ix. Sprinkler type irrigation shall not be used to water plantings other than grass.

x. At a minimum, microirrigation systems shall be equipped with pressure regulators, filters, and flush end assemblies. Two watering schedules, developed by the WaterSense irrigation partner shall be posted at the controller. One schedule shall be designed to address the initial grow-in phase of the landscape, and the second schedule shall be designed to address an established landscape. Both schedules shall vary according to the seasons.

xi. Irrigation systems shall be audited no less than once every three years by a WaterSense certified irrigation professional. The audit shall ensure proper operation of all irrigation components required above. If three or less WaterSense certified partners provide service to the area, a non-WaterSense certified irrigation professional may be utilized if permission is obtained from the Planning Board. EPA provides a list of certified partners by state.

xii. The irrigation system shall be leak-checked during the audit. If leaks are discovered, the irrigation system shall not be operated until leaks are repaired.

VII. INSPECTION

Landscape plantings and irrigation systems are subject to inspection by the building inspector or designated official for compliance with the provisions of this regulation.

VIII. ENFORCEMENT

Any landscaping installed in accordance with the requirements of this regulation shall be maintained in good order in perpetuity. Failure to install and maintain the landscape and/or automatic irrigation system as required shall be considered a violation of this regulation and subject to penalties as described below.

IX. SAVINGS

If any provision of this regulation is found to be unenforceable, such provision shall be considered separable and shall not be construed to invalidate the remainder of the regulation.

If there are other provisions within local or state regulations that are more stringent, those provisions shall apply.

Effective Date: The regulation shall take effect upon approval by the local legislative body. This regulation shall take effect upon approval by the Planning Board after a public hearing held in accordance with state statute.

Revised: May 2020