REGULATIONS AND GUIDELINES

FOR STEEP SLOPE PROTECTION AREAS (SSPA)

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Revised 8/21/2014- ko-edits

Section 1 – Purpose

By amendment to the Zoning Law of the Town of Middlesex by adding section 707 of Supplementary Regulations, the Town of Middlesex has designated Steep Slope Protection Areas (SSPA) within the Town for the purpose of protecting the sensitive Steep Slope Areas within the Town from the adverse effects of erosion, protecting the water quality of Canandaigua Lake and downstream water bodies, and minimizing environmental damage while permitting safe and reasonable development in order to protect the health, safety and welfare of the residents of the Town of Middlesex. These Regulations and Guidelines apply to all properties located with a Steep Slope Protection Area within the Town of Middlesex.

Section 2 – Steep Slope Protection Areas

2.1 Steep Slope Protection Areas (SSPA) are defined as those areas having slopes 15% or greater (ratio of vertical distance to horizontal distance) as delineated on a map(s) prepared utilizing LiDAR information displayed through GIS mapping products. These maps are available for review through the Middlesex Code Enforcement Office.

2.2 The boundaries and/or slope percentages shown on the SSPA Map may be supplemented or modified by an on-site survey prepared by a New York State Licensed Land Surveyor or a Professional Engineer whenever a subdivision or land development plan is submitted for review.

2.3 The Zoning amendment and associated regulations and guidelines divide the Town's Steep Slope Protection Areas (SSPA) into three distinct zones:

Zone A: 500 square feet (20 ft. x 25 ft.) of disturbance within 2000 feet horizontal distance from the mean high water mark of Canandaigua Lake

Zone B: 500 square feet (20 ft. x 25 ft.) of disturbance within 100 feet horizontal distance from any open water course

Zone C: 10,000 square feet (100 ft. x 100 ft.) of disturbance occurring beyond the horizontal distance stipulations in Zones A and B above.

2.4 Further, within these three zones the SSPAs are divided into three (3) slope categories that have distinct levels of protection:

1. Moderately Steep (15% to < 25%)
2 Very Steep (25% to < 40%)
3. Extremely Steep (40% and greater)

2.5 The Town Planning Board, Town Engineer, or a representative authorized by the Town Planning Board shall determine whether a SSPA has been shown with sufficient accuracy on the Applicant's plans.

Section 3 - Permitted Uses and Activities on Moderately Steep Slopes (15% to < 25%)

3.1 Except for the prohibited uses identified in Section 4- all permitted uses allowed in the underlying zoning district are allowed within this slope category as long as it conforms to Section 8 General Regulations and Design Guidelines.

Section 4 - Prohibited Uses and Activities on Moderately Steep Slopes (15% to < 25%)

4.1 The following uses and activities are **specifically prohibited** on Moderately Steep Slopes if the disturbance exceeds 500 square feet:

A. Removal of existing ground cover and root systems except when related to a permitted use.

B. Solid waste disposal, recycling uses, junkyards, or other similar outdoor storage use.

C. Installation of tennis courts.

Section 5 – Permitted Uses and Activities on Very Steep Slopes (25% to < 40%)

5.1 The following uses and activities creating disturbance **are permitted** within this category via by a Steep Slope Area Permit, **provided that** each activity is in compliance with the regulations of the underlying district, and is not prohibited by any other Town Law.

A. One single family residence with attached or detached garage.

B. One driveway to serve the residence / garage (Driveways must comply with the Town Private Driveways and Private Roads Law.)

C. Trams and/or stairs as may be needed to access another elevation on the property.

D. Minimal clearing of vegetation or grading, including the addition of fill, only as required for the construction of permitted construction activities within this category.

E. Sanitary and storm sewers with the approval of the Town Engineer and the DEC.

F. Sewage treatment system for residence. This must first be reviewed for location viability by local authorities, followed by design approval by the Watershed Inspector, DEC and/or the New York State Department of Health.

G. Utility transmission lines and aboveground utility line structures unless upon petition of a public utility corporation, the New York State Public Utility Commission shall, after public hearing, decide that the presence of such proposed lines or structures in question is not reasonably necessary for the convenience or welfare of the public.

H. New or expanded paths developed specifically for golf carts, ATV's or other similar small vehicles-maximum path width to be six feet

I. Minor detached structures such as storage /garden sheds, gazebos and playhouses.

Section 6 – Prohibited Uses and Activities on Very Steep Slopes (25% to < 40%)- if the disturbance in this slope category is 500 square feet or greater

The following items are **specifically prohibited** on Very Steep Slopes:

A. All items prohibited on Moderately Steep Slopes.

B. All terraced landscaping, with or without retaining walls, not directly required to construct items listed under Section 5.1.

C. Resource extraction uses.

D. Storm water retention basins.

E. Installation of in-ground or above ground pools

Section 7 –Permitted Uses and Activities on Extremely Steep Slopes of 40% or More

7.1 The following construction activities that require disturbance **are permitted** within this category via a SSPA Permit, **provided that** each activity is in compliance with the regulations of the underlying district, and is not prohibited by any other Town Law.

A. The construction of new stairs and/or new tramways as required for access to an allowable building site, existing residence, elevation change on the property or to the water front for lakeside property.

B. Replacement of existing structures, stairs or tramways, all to be within the same footprint, that are currently on the property.

C. The construction of roadside parking via retaining wall system if approved by the Town/County Highway Department or the Department of Transportation, whichever has jurisdiction.

D. Installation of structures that requires less than 500 square feet of disturbance.

7.2 All other uses or construction activities that require 500 square feet of disturbance or greater are prohibited.

Section 8 – General Regulations and Design Guidelines For SSPA Development

All Land Owners, Applicants, Developers, Licensed Engineers and Design Firms shall take in consideration the following for SSPA Development:

8.1 All federal and state laws, and all other applicable Town laws, codes, references and ordinances, such as:

- Development Reference Drawings located in Appendix II are to be used as a reference for designing to meet the standards of the law

- Town of Middlesex Zoning Law
- Town of Middlesex Land Subdivision Regulations
- Town of Middlesex Local Law for Regulation of Private Driveways and Private Roads
- Town of Middlesex Local Law for Storm Water Management and Erosion Control
- New York State SPDES Storm Water General Permit for Construction Activities
- The New York State Storm Water Management Design Manual, most current version or its successor, as published by the New York State Department of Environmental Conservation, hereafter referred to as the Design Manual
- The New York State Standards and Specifications for Erosion and Sediment Control ("blue book"), most current version or its successor, as published by the Empire State Chapter of Soil and Water Conservation Society, hereafter referred to as the Erosion Control Manual
- New York State Environmental Quality Review Act regulations (SEQRA)

NOTE: Many of these documents can be found on the Middlesex website: www.middlesexny.org

8.2 The proposed development should be designed to work with the natural elements of the site, locating the proposed improvements in such a manner as to minimize grade disturbance and tree removal. (See Appendix II as a reference)

8.3 The finished slope of all cuts or fills for any site work in areas where only vegetation is proposed to prevent erosion should not exceed a slope of one vertical to two horizontal (50% grade or 26.5 degrees of angle) without a retaining wall or other similar structural stabilization.

8.4 Any fill placed on the lot should be properly stabilized and, if necessary, depending on the nature of the soil types, soil characteristics, and existing slopes, supported by retaining walls or other appropriate structures.

8.5 Installation of new retaining walls higher than three feet above finished grade require design drawings to be stamped by a New York Professional Engineer.

8.6 Any existing retaining wall higher than three feet above finished grade incorporated into the proposed project design requires the evaluation of a New York Professional Engineer as to its structural integrity and written direction and certification as to its use.

8.7 The alignment of roads and driveways should follow the natural topography and minimize re-grading. Proposed roads, driveways and parking areas shall be designed so that land clearing and/or grading does not cause accelerated erosion.

8.8 If a permanent driveway cannot be legally built to serve the residence or other improvement, no

temporary construction road/driveway may be permitted.

8.9 Locate proposed new drainage features to provide for proper connectivity and flow to existing drainage gullies, etc. This shall include new drainage design features necessary within setbacks. Stormwater calculations shall be provided for any existing or new culverts or changes to existing gullies/concentrated flow paths and diversion swales that traverse the property. Storm water piping, channels and swales shall be designed based on the entire contributing drainage area to handle the 25 year- one hour rain event (currently 2.1 inches/hr).

8.10 Storm water calculations for pre and post development shall be included for all disturbances greater than 5,000 square feet within Zones A and B and greater than 15,000 square feet in Zone C. The following storm events shall be studied: one (1) year, ten (10) year, twenty five (25) year and one hundred (100) year storms. The engineer will complete both the Rational Method and TR55 method of calculating peak flows and the greater of the two calculated peak flows will be used. Stormwater calculations will include the entire drainage area to the site and the entire drainage area of the gully/stream that the site drains to.

- If downstream culverts/ditches/gullies/streams cannot handle the existing or increased flows then the post development site should be designed to provide a net-zero increase in the peak runoff flow rate for all analyzed storms. If site constraints do not allow for practices to obtain a net-zero increase in peak runoff then the applicant needs to calculate the drainage capacity of the most immediate downstream drainage culvert for the 25 year one hour storm (currently 2.1in/hr) design storm and determine if it can handle the increase from the proposed construction. In the event the anticipated peak flow exceeds the existing culvert capacity, and no alternative to reduce the peak flow exists, then the Planning Board and Code Enforcement Officer shall be notified. All discharged storm water from the site shall be reduced to non-erosive flow rates.

8.11 Stabilized diversion swales are to be located upgrade from any development on steep slopes to limit the volume of runoff water that may affect erosion, sedimentation or slope failure of these placed fills. Flow shall not be diverted onto neighboring properties.

8.12 Benching of existing grades to be disturbed shall meet NYSDEC Standards and Specifications for Erosion and Sediment Control, land grading, page 5B.49, design criteria 3 and figure 5B.23, as well as Town Standards.

8.13 Retaining walls constructed downslope of a road shoulder for the purpose of supporting a parking area should be designed to support a minimum of H-20 highway loading as a surcharge on the retaining wall, subject to applicable Highway Department approval. Construction of retaining walls within a road right-of-way requires written design approval from the applicable Highway Department prior to construction.

8.14 New York State Department of Health and/or Watershed Inspector approval of any proposed septic system design or repair is to be obtained in advance of Site Plan Review.

8.15 From October 15th until April 1st, disturbed land areas that are not worked for three (3) days must not be left bare or exposed. Approved temporary or permanent protective straw mulch and/or erosion control blankets must cover these disturbed areas to provide stabilization. From April 1st until October 15th disturbed land areas

that are not worked for five (5) days must not be left bare or exposed. Approved temporary or permanent seeding along with protective straw mulch and/or erosion control blankets must cover these disturbed areas. All seeding, straw mulching and erosion control blankets must meet the installation methods and quantities as stated in the New York State Standards and Specifications for Erosion and Sediment Control.

8.16 Indicate location and species name of all trees 6" diameter or greater proposed for removal. Label these trees on the plans. Trees 6 inches or greater within twenty (20) feet of the shoreline, within twenty (20) feet of the top of slope of the shoreline cliff area (slopes exceeding 100 percent/ 45 degrees with a vertical height of 20 feet or greater) or twenty feet from the toe of a gully shall **not be removed** unless they are deemed unhealthy or a safety hazard by a certified arborist or equivalent. Enhancing lake views can be done through a combination of canopy reduction and selective thinning without substantial tree removal at the top of the shoreline cliff area. Tree removal will be allowed in the gully zone for the purposes of traversing a gully via a bridge or culvert structure to access another portion of the property.

8.17 Based on the complexity of the project, the Planning Board retains the right to require the Applicant to have a certified geo-technical report prepared, which may include soil borings, to support the viability of proposed structures along with protecting the stability of the entire site.

8.18 Request a review by the Middlesex Fire Chief and CEO, to determine if the proposed development meets the latest State Building and Fire Code response requirements.

Section 9 – Preliminary Site Plan Requirements

9.1 Applicants shall submit a SSPA Permit Application to the Town Code Enforcement Officer with a Preliminary Site Plan prepared by a licensed professional engineer. In addition to the requirements for site plan approval under section 700.20 of the Zoning Law, the Preliminary Site Plan should include the following:

- Scale no more compressed than 40 feet per inch, with north arrow shown.
- Contours of existing and proposed topography for the overall property at a contour interval of no more than 2 feet.
- Existing, temporary and proposed roads, driveways, pathways and parking. Provide widths and slopes of these features. Show the public road serving the property.
- Existing right of ways and/or easements on the property.
- Location and size of all existing and proposed structures on the property, to include buildings, retaining walls, sheet piling, decks, docks, stairs and trams.
- Location and description of all existing and proposed, open and closed, drainage features, to include roof drains, footing drains and retaining wall drains, with discharge points identified. Storm water calculations shall be provided for all existing and proposed culverts or changes to gullies. The applicant will need to document that each of these drainage features can convey the 25 year-one hour

storm event (currently 2.1 inches/hr)

- Proposed locations of septic systems and water wells.
- Separate overlay map of categorized steep slope areas (coordinate w/ Code Enforcement).
- Site data table providing owner name, parcel address, lot size, tax map number, zoning district, and size of area being disturbed by the proposed development.
- All variances requested for the project site shall be listed.
- Required area of tree removal.
- Temporary and permanent erosion control features.

Section 10 – Final Site Plan Requirements

10.1 Following approval of the Preliminary Site Plan, the applicant shall submit a Final Site Plan of the proposed project. Modifications and/or enhancements to the Preliminary Site Plan shall include ~~but not be limited to,~~ the following:

- Delineate the steep slope categories as defined herein on the Final Site Plan through legible limit lines or shading. No distinction shall be made between original (naturally occurring) and man-made steep slope areas.
- Provide these Site Data Table enhancements: front, side, rear setback requirements. If the structure development is part of the application: basement, finished floor and roof elevations will also be provided.
- Indicate total area of disturbance, and in addition, show all topographic and existing structure information extending a minimum of 100 ft. beyond all parcel(s) property boundaries utilizing watershed/Town owned LiDAR if surveyor access is not possible. Site disturbance includes private roads/driveways that are jointly owned or utilized by applicant.
- For public road serving the property, show shoulder width, drive lane width and sight distance at driveway access to property.
- Show proposed driveway profile with existing grade, proposed grade and driveway slopes. This information shall be provided via separate details sections. Also provide proposed driveway cross-sections with existing and proposed grades for side slopes.
- Show proposed driveway pull offs, turn-arounds and emergency equipment access.
- Disturbances greater than 5,000 square feet in Zones A and B and 15,000 square feet in Zone C: Storm water calculations used for all proposed drainage improvements shall be submitted for review.

- Show all natural topographic features, including tree lines, brush lines, rock outcrops, runoff swales, creeks and gullies. Show wetlands, flood zones, soil types and their respective erodibility. Indicate vegetation features to be removed and to remain.

- Provide written details (including sequence of construction) and drafted sectional views of all temporary and permanent Erosion Control Methods that will be utilized, i.e., silt fence, inlet protection, sediment basins, check dams, construction entrance with maintenance plan, seeding/mulching mix, application rates & specifications and re-vegetation of all disturbed areas.

- Assess the need for installation of rolled erosion control matting or similar product designed for steep slope application. Require specialized engineered slope stabilization methods to ensure that all environmental and public safety concerns have been addressed in the best interest of the Town. Utilize the NY State Blue Book as the standard for design and installation.

- Show any temporary soil stockpiling locations, along with stabilization and erosion protection for the soil stockpiles.

- Show construction entrance and provide maintenance plans.

- Provide a Construction Execution Plan narrative on sites disturbing more than 5,000 square feet in Zones A and B and 15,000 square feet in Zone C.

Section 11 – Planning Board Review

During the review and approval process of an application for SSPA development, the Planning Board will take into consideration the following:

11.1 Allow the applicant to present a pre-application Concept Plan Review. An applicant is always encouraged to submit a concept plan, which includes a current topographical map showing the anticipated area of disturbance and preliminary project scope, to the Planning Board for informal review and discussion prior to filing a SSPA Permit Application. This conceptual review must be placed on the Planning Board agenda in advance, and will be conducted at no expense to the applicant. This preliminary step in the review process will help the applicant determine the feasibility of the proposed development.

11.2 Evaluate the application based upon Section 8 General Regulations and Design Guidelines, Section 9 Preliminary Site Plan Review and Section 10 Final Site Plan review standards utilizing the associated checklist.

11.3 If the Planning Board or the Town Engineer determines that the Applicant's steep slope mapping and/or project drawings are deficient in depicting existing land conditions, steep slope categories, appropriate contours and/or proposed site improvements to meet these regulations, the Applicant may be required to revise and resubmit (7) copies no later than (10) days prior to the next monthly Planning Board meeting. The Planning Board must identify the specific areas of the site plan application that are considered deficient.

APPENDIX I: DEFINITIONS

All other terms not specifically defined herein shall have the same meaning as used in the Zoning Law of the Town of Middlesex.

CONSTRUCTION EXECUTION PLAN – A written narrative, inserted on the site plan drawing or submitted as a separate document, describing the approach and sequencing of all construction activities, with primary emphasis on:

- initial and intermittent erosion control methods to be used and maintained
- site preparation activities (tree removal, clearing & grubbing, temporary crushed stone usage, temporary construction roads, clearing for material storage and equipment access, etc.)
- storage / removal of excavated materials
- construction entrance location and maintenance

CONCEPT PLAN - A sketch(s) with written narrative as necessary, prepared by the Applicant or his agent, to indicate the proposed development of the Applicant's parcel. Sketches can be drawn by hand, and placed on a copy of a corresponding tax map or similar existing document for presentation purposes. All existing and proposed new structures and driveway / parking should be shown. Approximate finished dimensions of buildings should also be indicated. The purpose of a Concept Plan is to provide visual aide for preliminary project review with the Town Planning Board, prior to preparing engineered drawings.

DEVELOPMENT STANDARDS - Plan and elevation sketches prepared by the Town Engineer to provide Applicants with design approach preferences for steep slope construction, to be reviewed prior to formal preparation of plans by the Applicant's Architect and/or Engineer. (see Appendix II)

DISTURBANCE - The removal of vegetation, any and all excavation, grading, filling, removal of soil / rock, demolition of existing structures, access created for construction purposes, drilling, trenching, benching, terracing, backfilling, storm and erosion control work, embankment stabilization, catch basins, culvert piping, swales, ditches, rip rap, construction entrances, driveways (including shared), retaining walls, utility work and shall include the conditions resulting from such activity.

EROSION - Detachment and movement of soil or rock fragments by water, wind, ice and gravity.

EXTRACTIVE USE - The removal of any soil, gravel, or other earth generated product from a property with the intent to sell or reuse. Site work performed via building permit in preparation for property improvements, where earth generated products are removed off site incidental to construction activities, shall not be deemed an extractive use.

GRADING - Adjusting the degree of inclination of the natural contours of the land, including leveling, smoothing and other modification of the natural land surface.

LIDAR - which stands for *Light Detection and Ranging,* is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. These light pulses—combined with other data recorded by the airborne system— generate precise, three-dimensional information about the shape of the Earth

and its surface characteristics. LiDAR information was obtained in 2006 through Pictometry and post processed through the Institute for Applied Geospatial Technology.

RESTORATION – The re-establishment of the grade, slope, stability, vegetation, or drainage system of disturbed property in a steep slope area by restoring the property back to substantially the same condition as existed prior to the disturbance.

SITE PLAN - Map(s) or drawn representation of a proposed project or development, sometimes accompanied by written description and/or specifications, containing sufficient information and detail for municipal review and approval.

STABILIZED - A condition where a disturbed or modified ground surface has received appropriate surface treatment, including structural cover or topsoil, seeding, mulching, geo-textile or erosion control matting (as applicable), to prevent erosion and sedimentation from occurring. In general, an area is considered "stabilized" when vegetative cover has exceeded 80% density coverage over that disturbed area or straw mulch has been applied and maintained at a rate of 2 tons per acre.

STEEP SLOPE – Slopes of land 15% or greater as delineated on a map(s) prepared for the Town utilizing LiDAR or by a licensed surveyor.

STORM WATER RUNOFF - The water that flows overland during a rainstorm. As a rainstorm occurs, the water is either absorbed by trees and plants, infiltrates into the ground, re-evaporates or flows overland. The portion of the water that flows overland is defined as storm water runoff.

STRUCTURE – Anything constructed or erected with a fixed location on the ground, or attached to something having a fixed location on the ground. "Structure" includes, but is not limited to: any building, foundation, cast-in-place concrete steps, all stairs and decks, above ground storage tanks, above ground water well components, both in-ground and above ground swimming pools, tennis courts, towers, billboards, retaining walls of any height, mortared or dry-laid stonework and trams.

STRUCTURAL FILL – Native or imported soil or processed material suitable for achieving the minimum bearing capacity and compaction requirements for the intended use.

SUBGRADE – The finished surface elevation achieved after removing organic surface material, followed by any necessary cut or fill activity, but prior to installing base and surface treatments.

TREE REMOVAL – Cutting down a tree, or the effective destruction of a tree through intentional damaging, poisoning, or other action resulting in the death of the tree.

VEGETATIVE PROTECTION - Stabilization of erosive or sediment producing areas by covering the soil with:

a. Permanent seeding, producing long-term vegetative cover,
b. Short-term seeding, producing temporary vegetative cover, or
c. Sodding, which is the placement of cultivated sod onto prepared topsoil to promote rapid soil stabilization.

WATERCOURSE – Any natural or man-made channel through which water flows intermittently or continually, such as rivers, streams, creeks, ravines, gullies, ditches, etc.

WATERSHED - The area or extent of land where water from rain and melting snow or ice drains downhill into a body of water, such as a river, lake, reservoir, estuary or wetland. This area can be comprised of one or several drainage basins, which include both the streams and rivers that convey the water as well as the land surfaces from which water drains into those channels and water bodies.

APPENDIX II: DEVELOPMENT STANDARDS

(ST-1 thru ST-6 attached hereto)