



Town of Caroline

INFORMATION SESSION

Proposed Revisions to Subdivision and Site Plan Laws





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- Agenda
 - Review of Applicability and Purpose
 - Explanation of work completed
 - Subdivision local law
 - Site Plan Review local law
 - Next Steps



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– Purpose:

- *“The Town Board wishes to review and study the Town of Caroline’s Site Plan Review and Subdivision law to determine whether to propose standards, requirements, and design and mitigation guidelines to address water conservation, energy efficiency, reduction in greenhouse gas emissions, development of renewable energy resources, and other changes as may be necessary...”*

SUBDIVISION LOCAL LAW

Applicability

Exemptions...

- Lot Line Adjustments
- Rural Land Divisions
- Small-scale Residential Subdivisions - subdivision resulting in addition of up to 5 lots along existing public highway of < 5 acres in size within a 3-year period.
- Multiple Residential Units on One Lot - single lot with not more than 3 independent residential units.

Subdivisions Subject to Review...Everything else!

Caroline Site Plan Review

Applicability

- A. Commercial uses >10,000 sq. ft. and/or site disturbances > 1 acre.*
- B. Commercial uses of any size with drive-through facility.*
- C. Institutional uses >10,000 sq. ft. and/or site disturbances > 1 acre.*
- D. Heavy industrial uses of any size.*
- E. Light industrial uses >25,000 sq. ft. and/or site disturbances > 1 acre.*
- F. Multi-family Residential uses*
- G. Staging, storage, or parking areas for land use activity that falls within jurisdiction of Caroline's Site Plan Review Law.*
- H. Waste disposal and Waste storage, processing, or bulk transfer areas.*
- I. Wind facilities > 80 ft. high.*
- J. Mixed uses of any size (?)*
- K. Any development involving the handling, storage, placement, or transfer of hazardous materials.*
- L. CAFOs*
- M. Any land use that negatively affects important Agricultural Resources.*
- N. Any modification of any of the above for which no previous Site Plan Review occurred.*
- O. For any of the above, any (i) expansion of existing structures' gross floor area by 10% or more, (ii) expansion of outdoor inventories that increase gross storage volume by 10% or more, and (iii) any new outdoor Land Use Activity not previously subject to Site Plan Review.*



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– Local land use law structure

- Both Subdivision and Site Plan Review laws contain “Review Criteria” and “Design Guidelines”. What is the difference?
 - Review Criteria are part of the law and describe specific standards that must be met. The standards are based on existing state, county, and town laws.
 - Design Guidelines exist separately from the law, currently as questions in an appendix. They derive from the law’s Review Criteria and the Town’s Comprehensive Plan. Developers and the Review Board are required to discuss these guidelines during project review. We propose that they accompany each law as resolutions, modifiable by the town board.



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Why are we reviewing these two local laws now?

1. Caroline's Subdivision Law was adopted 17 years ago. Many local laws that impact subdivision are not referenced in the Review Criteria.
2. The State Environmental Quality Review Act (SEQRA) has been changed to include review of energy usage and sustainability.
3. Tompkins County has amended their 239 1 & m review (mandated by NYS Law) to include specific review of energy efficiency.



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– Goals:

- Clarify relevance and importance of NYS SEQRA review*
- Clarify relevance of Tompkins County's new 239 Energy Recommendations*
- Improve and create consistency between the two laws*
- Clarify expectations and review process*



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Tompkins County Energy Recommendations for New Construction

The Tompkins County Energy Roadmap (2016) is intended to help inspire immediate action to reduce energy use and transition to renewable energy as a way to help meet our County's 80% greenhouse gas emission reduction goal by 2050. Constructing buildings at higher energy standards and incorporating renewable energy systems are essential to attaining that goal. We recommend that all applicants for new construction address how they will support this goal, including whether they intend to follow the recommendations under each of the following five elements.

1) ENERGY STAR products include a wide range of equipment and appliances that are independently certified to save energy without sacrificing features or functionality. Water saving fixtures can reduce energy needed for hot water.

Recommendations:

- Require that water fixtures meet EPA's Water Sense requirements.
- Require that permanent appliances (apartment refrigerators, restaurant cooking equipment, etc.) be ENERGY STAR-rated.



Town of Caroline

Tompkins County Energy Recommendations for New Construction (cont.)

2) Recent advances in heat pump design have reduced installation costs and made them more cost-effective than electric resistance heat, propane, and oil, and close in life cycle costs to natural gas. Use of electric heat pumps allows elimination of fossil fuels as they can be powered by renewable energy sources such as solar photovoltaic.

Recommendations:

- Utilize electrically-powered heat pump systems (ground or air-sourced heat pumps); avoid boiler-assisted heat pump systems, avoid systems that burn fossil fuels.
- Utilize air-sourced heat pump hot water heaters.



Town of Caroline

Tompkins County Energy Recommendations for New Construction (continued)

3) The state has a goal that 50% of NYS electricity will be generated by renewables (solar, wind, hydropower, biomass) by the year 2030.

Recommendations:

- Design roofs to be “solar receptive”: Maximize area available for solar collection systems. For pitched roofs, place roof-mounted components (plumbing vents, exhaust fans, etc.) on north-facing roof surfaces, to keep south-facing surfaces available for solar collection systems. Orient one roof surface to the south, plus/minus 30 degrees, to maximize potential for solar energy.
- Maximize solar collection systems on available roof areas, and consider using high-production solar panels to maximize solar production for a given roof area, especially for medium-rise and high-rise buildings.



Town of Caroline

Tompkins County Energy Recommendations for New Construction (continued)

4) Energy efficient building design begins with the building envelope -- the walls, windows, foundation and roof.

Recommendations:

- Design window-to-wall ratio less than 25% (the new energy code requires 30% or less). Keep large windows on south-facing surfaces and important facades, minimize windows on north-facing surfaces and in spaces which see low occupancy (stairwells, corridors, utility rooms, etc.).
- Avoid unusually complex building shapes.
- Use 20% more insulation R-value than required by the energy code.
- Use best practices for minimizing infiltration and stack effect, and require inspection/commissioning of these elements: vestibules at entrance doors, air sealing around window and door frames, sealing at exterior wall/floor junctions, and guarded blower door testing of individual spaces or entire building floors.

We recommend that all applicants for new construction of greater than 20 units also address whether they are intending to follow the recommendations under each of these three added elements.



Town of Caroline

Tompkins County Energy Recommendations for New Construction (continued)

5) Lighting controls and high-efficiency lighting technology (such as LED or induction) offer significant benefits including greatly reduced energy use and cost, sophisticated controls, simplified maintenance and longer life.

Recommendations:

- Perform lighting design on a space-by-space basis, using the space-by-space lighting power density method (not the whole-building method). Use LED lighting where possible. Design to lighting power density of 15% less than required by the energy code
- Require occupancy sensors where possible, for both indoor and outdoor lighting. Require short off-delay (1 minute or less), and commissioning of lighting controls.



Town of Caroline

6) High-efficiency heating and cooling systems cost incrementally more than standard- efficiency but have a positive payback over their useful life.

Recommendations:

- Select high-efficiency heating and cooling plants with rated efficiencies at least 15% higher than required by the energy code.
- Select high-efficiency domestic hot water (DHW) plants with rated efficiencies at least 15% higher than required by the energy code.
- Avoid placing heating and cooling distribution systems in unheated spaces, such as attics, basements, etc. Give preference to systems that have efficient distribution systems and low distribution losses (for example, room-by-room fan coils).
- Use energy recovery ventilation systems in air-conditioned buildings, and heat-recovery ventilation systems in buildings that do not have air-conditioning. Design ventilation systems separate from heating and cooling systems.
- Assess ductwork for heating, cooling and ventilation. If leakage is greater than 10%, seal chases and shafts with aerosol duct sealing process.
- Select heating/cooling systems that allow thermal zoning on a space-by-space basis



Town of Caroline

Tompkins County Energy Recommendations for New Construction (continued)

7) Whole building energy models can allow you to dramatically reduce energy costs, reduce carbon emissions and even reduce some construction costs.

Recommendation:

- Employ whole-building energy modeling to optimize building energy performance.



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- Input and guidance on revisions:
 - 3 public meetings held in fall 2017
 - Planning Board
 - Subdivision Review Board
 - Council members
 - Planner (Matt Johnston)
 - Town attorney (Guy Krogh)



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Recurrent themes from Public Meetings:

- *Encourage development of livable, walkable residential communities; clustered development*
- *Protect open space, water, natural resources*
- *Insure quality construction that maximizes energy efficiency*
- *Provide housing to meet community needs*
- *Provide public transportation choices*
- *Encourage mixed use that includes agriculture*
- *Consider water use and stormwater management*
- *Encourage repurposing of buildings*
- *Avoid large-scale development*



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Subdivision Law

- What was done?
 - Improved references to Town Comprehensive Plan
 - Reinforced references to other Town laws
 - Clarified authority of Review Board to retain technical assistance
 - Reviewed water resources criteria
 - Added Review Criteria regarding energy use and GHG emissions
 - Added to, and improved, Design Guidelines



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Subdivision Law (cont.)

- Design Guidelines questions expanded:
 - Consideration of redeveloping existing sites for subdivision development?
 - Consideration of “green infrastructure”?
 - Consideration of site orientation to maximize energy efficiency and/or renewable energy?
 - Consideration of GHG mitigation via NY DEC Guidelines in subdivision design?



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Site Plan Review Law

- What was done?
 - Improved references to Town Comprehensive Plan
 - Reinforced referenced to other Town laws
 - Review Board retention of technical assistance
 - New Site Plan review theme of energy and GHG associated with physical development
 - Coordination of water resources Criteria with Subdivision law



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Site Plan Review Law (cont.)

- Updated criteria for site-lighting standards
- New criteria for sustainable transportation
- New criteria for energy and GHG reduction
- Added to, and improved, Design Guidelines



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Site Plan Review Law (cont.)

- Design Guidelines questions expanded:
 - Revise consideration of environmental health impacts of building materials for developments?
 - Consideration of International Dark Sky Association recommendations for lighting equipment?
 - Consideration of best practices in building shell design?
 - Consideration of Site Plan by County Planning department to meet GML 239 requirement?



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- Design Guidelines questions expanded (cont.):
 - Consideration of EnergyStar-certified products?
 - Consideration of “green infrastructure” in design?
 - Consideration of site orientation to maximize energy efficiency and/or renewable energy?
 - Consideration of GHG mitigation via NY DEC Guidelines?



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- Now what?
 - Feedback?
 - Additional review by Town Attorney
 - Town Board sets a public hearing date
 - Public Hearing on final drafts
 - Town Board vote on adoption of revised Subdivision and Site Plan Review local laws



Town of Caroline

