

TOWN OF WEATHERSFIELD

LAND USE ADMINISTRATOR'S OFFICE

(802)674-2626

P.O. BOX 550 ASCUTNEY, VT 05030

landuse@weathersfield.org

Planning Commission Agenda Martin Memorial Hall – 5259 Route 5, Ascutney, Vermont 05030 Remote option – Zoom details below Monday, September 12 – 6:30 PM

- 1. Call to Order
- 2. Agenda Review
- 3. Comments from the Chair and Land Use Administrator
- 4. Comment from Citizens regarding items not on the agenda
- 5. Fairbrother Sketch Plan Review
- 6. Bylaws PUD Review
- 7. Town Plan Energy Section
- 8. Town Plan General
- 9. Discussion of Items for Future Agendas
- 10. Any other business that can be legally discussed
- 11. Adjourn

The next regularly scheduled meeting of the Planning Commission will be **Monday**, **September 26**, **2022 - 6:30 PM**, Martin Memorial Hall.

Due to public demand and COVID-19; the Town has changed its public meeting platform from GoToMeeting to Zoom. For computer access, please go to this website, where you will find instructions and links to the meeting: https://www.weathersfieldvt.org/home/news/public-meetings-zoom

To join any public meeting via phone, dial (929) 205-6099. When prompted, enter meeting ID 542-595-4364. You will not have a participant ID. Please press # when prompted to skip this section. The passcode for all meetings is 8021.

AGENDA ITEM

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CHARTERED BY NEW HAMPSHIRE AUGUST 20, 1761

Town of Weathersfield

POST OFFICE BOX 550 ASCUTNEY, VERMONT 05030-0550

NEW YORK APRIL 8, 1772

Telephone: [802] 674-2626

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E-mail: zoning@weathersfield.org Website: http://www.weathersfield.org

Planning and Zoning

APPLICATION FOR SKETCH PLAN REVIEW

Application # 27.08.03. SP.

Applicant Name Bryan Fairbrother Address (Mailing) P.O. Box 151 Ascutney, VT 05030 Telephone # 603-617-8202 Email Address Fairbrother 39@gmail.com
Address (Mailing) P.O. Box 151 Ascutney, VT 05030
Telephone # 603-617-8702 Email Address Fair brother 39@ gmail. com
Landowner Name Kenneth Fairbrother Address (Mailing) 987 Roberts Rd Springfield, VT 05/56 Telephone # 807-376-4580 Email Address Havoctrucking@ yahoo.com
Subdivider Name
Address (Mailing)
Address (Mailing) Email Address
Name of Project <u>fair brother Subdivision</u> Tax Map/Parcel Number <u>09-07-75,000</u> Location of Subdivision <u>982 Roberts Road, Weathersfield, VT</u>
Written description of proposed development plans, including number and size of lots, and the general timing of development. Subdivide 18.66 acre lot for the purpose of building a single family home.
Sketch should clearly indicate existing and proposed lot lines, dimensions and lot numbers.
The Planning Commission may require additional information depending upon the scope and location of the proposed project
Man Suffer _ 8-3-22
Kandowner Signature Date

(See checklist on reverse side)

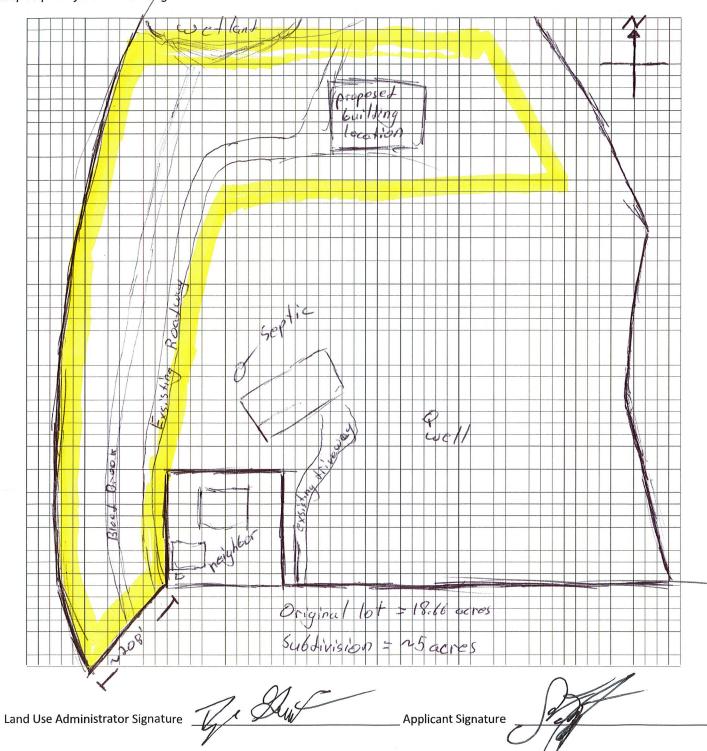
	Submit two (2) copies of this application to the Land Use Administrator at least twenty-one (21 days prior to a regular meeting of the Planning Commission.							
	discuss the sketch plan and requirements of the Subdivision Regulations.							
	Completed Impact Statement							
	ING – State permits may be required for this project. Call 802-282-6488 to speak to the State							
	Specialist before beginning construction.							
Meetin	g date at which you should be present: August 27, 2022							
FOR O	FFICE USE							
	41							
Date R	resented to the Planning Commission August 22, 2022							
Date p	resented to the Planning Commission Avovst 27, 2027							
p	110/							

Applica	ation No. 27.08, 03.5P. Date of Notice 9/7/2022							
Date re	ceived by AO August 3, 2027 Date of Notice 9/7/2022 Date of Notice 9/7/2022 Date of Hearing 9/12/2022							
Fee Pa	id \$							
Date Pa	aid 8/3/2077 Appeal granted denied							

T:\Departments\Land Use and Zoning\APPLICATION FORMS\Applications\Application for Sketch Plan Review.docx

Site Plan Drawing

Draw an aerial view of the property described in this application showing a north arrow, all property lines, and dimensions of land. Include the shape, size and location of all existing and proposed structures (principal and accessory) on the property with measurements to the front, sides, rear and closest property boundary lines (setbacks) and distances between each structure. Identify the use of all buildings, and the location of septic/sewer and water utilities. Identify access from Town or State Highway and road frontage distance. Identify any deeded easements or rights-of-way. Include any proposed signs in the drawing. Include any streams, water bodies and wetlands. If the scale is to small to show details after drawing all property lines, please use supplemental pages to map required features at a larger scale.



Applicant Signature



Town of Weathersfield

Date: 08/03/2022 Time: 15:06:09

Clerk: osavage Account: 090225

Name: FAIRBROTHER KENNETH

Comments:

Description

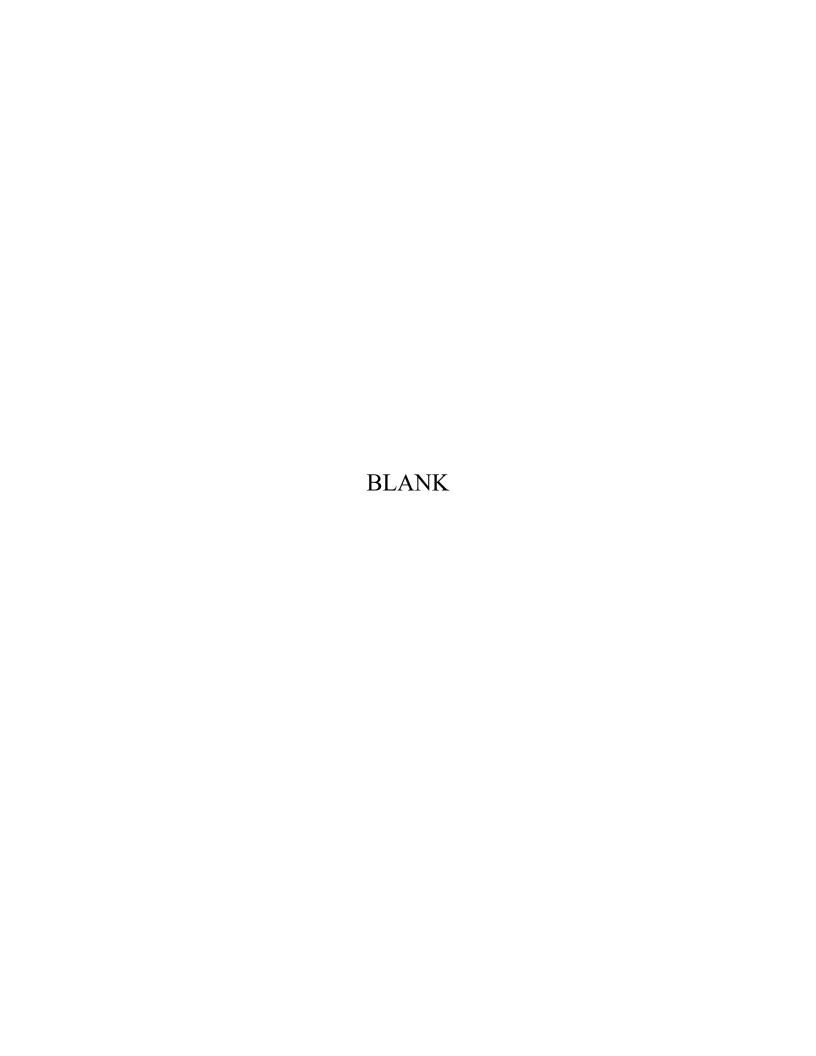
Amount

Zoning Permits

100.00

CASH PAYMENT

Thank you



Section 230. Sketch Plan Review (all subdivisions) - Discussion sheet

Sketch	n Plan #						
Subdi	vider's Name						
Date o	of Sketch Plan Review						
NOTE	The purpose of this sketch plan review is to have a preliminary discussion with the						
subdi	vider about the proposed project.						
1.	Ask the subdivider to present the project to the Commission. Focus the discussion on: the overall project concept the project's context with the surrounding neighborhood and related resources.						
2.	Is there anyone from the general public here with input on this project? () Yes () No Have any written comments from the general public on this project been received? () Yes () No						
3.	Is there anyone from the municipality here with input on this project? () Yes () No Have any written comments from the municipality regarding this project been received? () Yes () No						
4.	Review the project taking into consideration the requirements of: the subdivision regulations the zoning bylaws other ordinances and policies in effect Does the proposed project conform to the subdivision regulations? () Yes (
) No No	Does the proposed project conform to the zoning bylaws? () Yes () No Does this project conform to all other ordinances and policies in effect? () Yes ()						
	Are waivers being sought to resolve conflicts? () Yes () No						
5.	Does the sketch plan conform to the Town Plan? () Yes () No						

6.	Will the project be in conflict with developments proposed by any public agency, existing					
	private and public development, facilities and services? () Yes () No					
7.	Are there any special problems with the project? () Yes () No					
8.	Is this the best possible design for both the applicant and the Town? () Yes () No					
Within	ng Commission Recommendations thirty (30) days of the final meeting with the applicant, the Planning Commission, based information provided in the application, shall issue recommendations in writing:					
	(1) A preliminary determination that the proposed subdivision generally					
	() conforms () does not conform					
	to applicable planning and design standards pursuant to Article 3 of these regulations, and with the goals, objectives and policies of the Town Plan, and other municipal regulations currently in effect.					
	(2) Recommendations for changes in the design of this project include:					
	(3) The following additional information is requested for the final subdivision application for this project (see Table 2.1).					
	(4) The following additional studies or supporting documentation is required for this project:					
	(5) A preliminary plan review () is () is not required for this project in accordance with Section 240.					
	(6) A master plan () is () is not required for this project because the land may support subsequent subdivisions or public facilities are planned for the vicinity in the Capital Budget and Program and/or Town Plan. The master plan is intended to plan for all possible future subdivisions in accordance with these Regulations and the Zoning Bylaws in effect, to achieve the most efficient subdivision infrastructure plan, and not preclude the potential for future subdivisions. The master plan is to help guide the subdivider and Planning Commission in any subsequent subdivision applications for the affected lands					

AGENDA ITEM

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Article 2: Zoning Districts and District Standards

- 2.5 Table of Districts and Uses
- 2.5.1 *Village* (*v*)
- 2.5.2 *Hamlet* (H)
- 2.5.3 Rural Residential (RR-1)
- 2.5.4 Rural Residential Reserve (RRR 3-5)
- **2.5.5** *Conservation* (*C***-10**)
- 2.5.6 Highway Commercial (HC)
- 2.5.7 Industrial (I)

AREA, LAND & STRUCTURAL REQUIREMENTS:

- 1. Only one principal use is allowed per parcel of land.
- 2. Each principal use requires at least the minimum lot area and minimum required frontage specified for the district in which it is located.
- 3. Establishment of multiple principal uses on a single parcel of land requires a PUD permit.
- 4.3. Soil or terrain conditions may require larger lot sizes to satisfy Town or State public health regulations.

Article 5: Development Review

5.1 Application Submission Requirements

An application for a zoning permit shall be filed with the Administrative Officer on form(s) provided by the municipality. Required application fees, as set by the Legislative Body, also shall be submitted with each application.

5.1.3 PUD Review Application

Applications for PUDs shall include the following, in addition to the information required for subdivisions:

- a) **Application Form**: Supplied by the Administrative Officer; signed by the owner of record and, in the case of a non-owner applicant, by the applicant;
- b) Site Plan: A site plan shall meet all of the requirements of Section 5.1.2(b).
- c) **Project Narrative**: A description of the proposed project shall be required as part of a complete application. Also required is a narrative that is clear and succinct and includes:
 - a. A brief summary of the project and how it meets the PUD standards in this section;
 - b. A statement describing all proposed modifications, changes, or supplements to requirements in the Zoning Bylaws. Any such modification approved under this section shall be specifically set forth in terms of standards and criteria for the design, bulk and spacing of buildings and the sizes of lots and open spaces which shall be required and these shall be noted or appended to the plat;
 - c. A sound proposal for the financing and membership of the management organization which will maintain and operate the property in common ownership,

- such as community facilities, private roads, and/or open spaces; and,
- d. Additional information required by the Planning Commission to determine whether the proposed mix of uses, density and scale and intensity of uses will meet the standards set forth in these Zoning Bylaws.
- d) **Application Fees**: All applicable fees must be paid as part of a complete application.
- e) PUD applications may involve single or multiple properties and one owner or multiple owners under a common application.
- f) PUD applications are subject to approval by the Planning Commission in accordance with the requirements of Section 5.4 in these Bylaws.

5.4 Planned Unit Development

In accordance with the provisions set forth in Section 4417 of The Act, Planned Unit Developments (PUDs) are allowed to permit flexibility in the application of the Zoning Bylaws for the purposes of Section 4302 of The Act and in conformance with the Weathersfield Town Plan.

5.4.1 *Purpose*

- a) To encourage compact, pedestrian-oriented development and redevelopment, and to promote a mix of residential uses or nonresidential uses, or both, especially in downtowns, village centers, new town centers, and associated neighborhoods.
- b) To implement the policies of the municipal plan, such as the provision of affordable housing.
- c) To encourage any development in the countryside to be compatible with the use and character of surrounding rural lands.
- d) To provide for flexibility in site and lot layout, building design, placement and clustering of buildings, use of open areas, provision of circulation facilities, including pedestrian facilities and parking, and related site and design considerations that will best achieve the goals for the area as articulated in the municipal plan and bylaws within the particular character of the site and its surroundings.
- e) To provide for the conservation of open space features recognized as worthy of conservation in the municipal plan and bylaws, such as the preservation of agricultural land, forest land, trails, and other recreational resources, critical and sensitive natural areas, scenic resources, and protection from natural hazards.
- f) To provide for efficient use of public facilities and infrastructure.
- g) To encourage and preserve opportunities for energy-efficient development and redevelopment.

5.4.2 Applicability

- a) The PUD provisions may be applied to any land development in any zoning district within the Town of Weathersfield at the request of the applicant.
- b) Uses shall be limited to those permitted and conditional uses within the district in which the PUD is proposed.

5.4.3 PUD Review Procedures

- a) Complete applications for PUDs must include the information specified in Section 5.1.
- b) PUD applications shall be reviewed under the Subdivision Application Procedures set forth in Weathersfield's Subdivision Regulations, as most recently amended.
- c) Approval granted under this section for a PUD that involves the development of one or more uses requiring approval under conditional use review (Section 5.3) does not exempt

the proposed development from both review processes, although applications for PUDs may be reviewed concurrently.

d) The order of PUD review will be:

- 1. Planning Commission Sketch Plan Review
- Zoning Board of Adjustment Site Plan Review, Conditional Use Review, other reviews administered by the ZBA
- 3. Planning Commission Preliminary Review (if required by PC)
- 4. Planning Commission Final Plat Review

5.45.41 General Standards

In addition to the standards set forth in Weathersfield's Subdivision Regulations, the following general standards must be met in order for the Planning Commission to approve a PUD application:

- a) PUD is consistent with Town Plan.
- b) The density requirements do not exceed the number of units permitted if the land were subdivided in accordance with district regulations.
- c) All Site Plan Review requirements in Section 5.23 have been met.
- d) The PUD is an appropriate and unified treatment for the proposed development.
- e) The development is designed so as to be compatible with the character of the area. Particular attention will focus on the aural and visual impacts.
- f) The development will not place an undue burden on municipal services.
- g) State and local standards for fire and safety regulations by local fire and police officials are in compliance.
- h) Adequate water supply and sewage disposal facilities are provided.

5.4.5 Standards for Residential PUDs

- a) The total number of dwelling units in any Residential PUD must not exceed 125% of the number of lots into which the parcel could be legally subdivided based upon minimum lot size requirements of these Bylaws.
- b) Only residential and residential accessory uses shall be permitted within a Residential PUD.
- c) Of the land left open within the Residential PUD for common usage or ownership, no more than 25% shall be developed for community facilities (excluding subsurface installations), access road, parking areas, or recreational structures.

5.5.2 Modification of Zoning Regulations

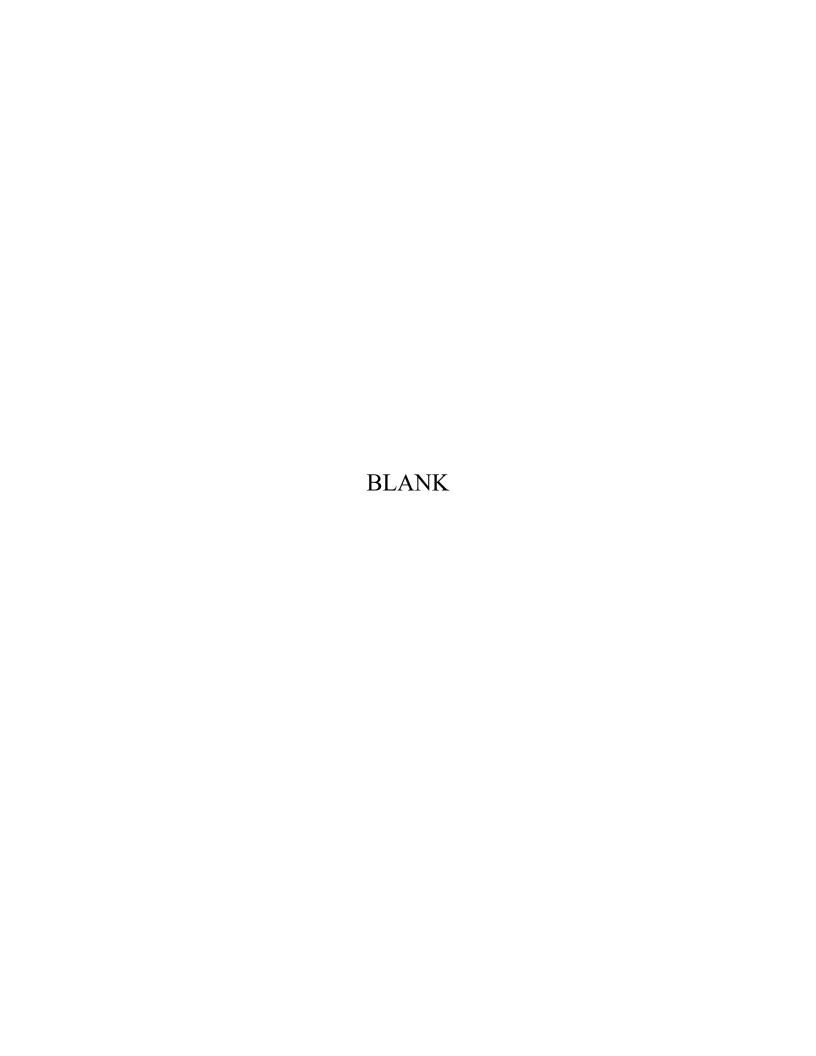
After a duly-warned public hearing (per Section 6.3), simultaneously with subdivision approval, and subject to the standards and conditions set forth in this section, the Planning Commission may modify the zoning district regulations for the proposed PUD as to the following requirements only:

- a) Setbacks, including provision for zero lot lines;
- b) Height, Bulk and Spacing of Buildings;
- c) Type of Building, including a mix of residential and commercial uses in one building, a variety of residential structures (one, two, and multi-family structures).
- d) Location of buildings; and

Rev 2

e) Size of lots.

Any modification of the Bylaws for the proposed PUD granted by the Planning Commission shall be noted on the subdivision plat.



VERMONT GENERAL ASSEMBLY

Vermont Laws

The Vermont Statutes Online

Title 24: Municipal And County Government

Chapter 117: Municipal And Regional Planning And Development

Subchapter 007: Bylaws

(Cite as: 24 V.S.A. § 4417)

§ 4417. Planned unit development

- (a) Any municipality adopting a bylaw should provide for planned unit developments to permit flexibility in the application of land development regulations for the purposes of section 4302 of this title and in conformance with the municipal plan. The following may be purposes for planned unit development bylaws:
- (1) To encourage compact, pedestrian-oriented development and redevelopment, and to promote a mix of residential uses or nonresidential uses, or both, especially in downtowns, village centers, new town centers, and associated neighborhoods.
- (2) To implement the policies of the municipal plan, such as the provision of affordable housing.
- (3) To encourage any development in the countryside to be compatible with the use and character of surrounding rural lands.
- (4) To provide for flexibility in site and lot layout, building design, placement and clustering of buildings, use of open areas, provision of circulation facilities, including pedestrian facilities and parking, and related site and design considerations that will best achieve the goals for the area as articulated in the municipal plan and bylaws within the particular character of the site and its surroundings.
- (5) To provide for the conservation of open space features recognized as worthy of conservation in the municipal plan and bylaws, such as the preservation of agricultural land, forest land, trails, and other recreational resources, critical and sensitive natural areas, scenic resources, and protection from natural hazards.
 - (6) To provide for efficient use of public facilities and infrastructure.
- (7) To encourage and preserve opportunities for energy-efficient development and redevelopment.
- (b) The application of planned unit development bylaws to a proposed development may:

7/6/22, 9:59 AM Vermont Laws

(1) Involve single or multiple properties and one owner or multiple owners. Procedures for application and review of multiple owners or properties under a common application, if allowed, shall be specified in the bylaws.

- (2) Be limited to parcels that have a minimum area specified in the bylaws or a minimum size or number of units.
- (3) Be mandatory for land located in specified zoning districts or for projects of a specified type or magnitude as provided in the bylaws.
- (c) Planned unit development bylaws adopted pursuant to this section at a minimum shall include the following provisions:
- (1) A statement of purpose in conformance with the purposes of the municipal plan and bylaws.
- (2) The development review process to be used for review of planned unit developments to include conditional use or subdivision review procedures, or both, as specified in the bylaws.
- (3) Specifications, or reference to specifications, for all application documents and plan drawings.
- (4) Standards for the review of proposed planned unit developments, which may vary the density or intensity of land use otherwise applicable under the provisions of the bylaws in consideration of and with respect to any of the following:
- (A) The location and physical characteristics of the proposed planned unit development.
 - (B) The location, design, type, and use of the lots and structures proposed.
 - (C) The amount, location, and proposed use of open space.
- (5) Standards requiring related public improvements or nonpublic improvements, or both; and the payment of impact fees, incorporating by reference any development impact fee ordinance adopted pursuant to chapter 131 of this title.
- (6) Provisions for the proposed planned unit development to be completed in reasonable phases, in accordance with the municipal plan and any capital budget and program.
- (7) Provisions for coordinating the planned unit development review with other applicable zoning or subdivision review processes, specifying the sequence in which the various review standards will be considered.
- (8) Reviews that are conducted in accordance with the procedures in subchapter 10 of this chapter.

7/6/22, 9:59 AM Vermont Laws

(d) Planned unit development bylaws may provide for, as part of the standards described in subdivisions (c)(4) and (c)(5) of this section, the authorization of uses, densities, and intensities that do not correspond with or are not otherwise expressly permitted by the bylaws for the area in which a planned unit development is located, provided that the municipal plan contains a policy that encourages mixed use development, development at higher overall densities or intensities, or both.

- (e) Standards for the reservation or dedication of common land or other open space for the use or benefit of the residents of the proposed planned unit development shall include provisions for determining the amount and location of that common land or open space, and for ensuring its improvement and maintenance.
- (1) The bylaws may provide that the municipality may, at any time, accept the dedication of land or any interest in land for public use and maintenance.
- (2) The bylaws may require that the applicant or landowner provide for and establish an organization or trust for the ownership and maintenance of any common facilities or open space, and that this organization or trust shall not be dissolved or revoked nor shall it dispose of any common open space, by sale or otherwise, except to an organization or trust conceived and established to own and maintain the common open space, without first offering to dedicate the same to the municipality or other governmental agency to maintain those common facilities or that open space.
- (f) The approval of a proposed planned unit development shall be based on findings by the appropriate municipal panel that the proposed planned unit development is in conformance with the municipal plan and satisfies other requirements of the bylaws.
- (g) The appropriate municipal panel may prescribe, from time to time, rules and regulations to supplement the standards and conditions set forth in the zoning bylaws, provided the rules and regulations are not inconsistent with any municipal bylaw. The panel shall hold a public hearing after public notice, as required by section 4464 of this title, prior to the enactment of any supplementary rules and regulations. (Added 2003, No. 115 (Adj. Sess.), § 95.)

AGENDA ITEM

7

ENERGY

7.1 Introduction

We all use energy in many forms to conduct our daily lives. That energy may come from local sources or be imported from outside the town. Either source may be renewable or non-renewable. Renewable energy comes from sources that are naturally replenished and include biomass (wood, corn, grasses, and vegetable oil), the sun (solar), wind, the earth (geothermal), water (hydro), or cow manure (methane digesters - "cow power"). Non-renewable energy is produced from sources that cannot be renewed by human activity or within the human time scale. These include oil, natural gas, uranium, and coal.

Weathersfield is heavily dependent upon imported, non-renewable sources to meet its energy needs. This chapter provides an analysis of our energy resources and needs, as well as energy scarcity, conservation, costs, and problems in our community.

The 2022 Vermont Comprehensive Energy Plan (CEP)) recommends comprehensive consideration of adjustments to the Renewable Energy Standard, including consideration of a low-carbon or carbon-free standard, in addition to 100% RES.

- 7.1.1 The overall purpose of this energy plan is to provide decision-making guidance to:
 - 7.1.1.1 Weathersfield Town Government
 - 7.1.1.2 Residents of Weathersfield
 - 7.1.1.3 Weathersfield Business and Agricultural Community
 - 7.1.1.4 Agency of Natural Resources in the Act 250 permit process
 - 7.1.1.5 Public Service Board in the Act 248 permit process
 - 7.1.1.6 Southern Windsor County Regional Planning Commission
- 7.1.27.1.1 <u>In addition, tT</u>his plan seeks to:
 - 7.1.2.17.1.1.1 Help the town identify ways to conserve energy in its municipal functions,
 - 7.1.2.27.1.1.2 Encourage renewable or lower-emission energy sources for electricity, heat and transportation dentify alternative sources of energy that are suitable for the town and that promote a balance between economics and pollution reduction,
 - 7.1.2.37.1.1.3 Encourage-a pattern of development that likely results in the conservation of energythe town's residents to conserve energy, and
 - <u>7.1.1.4</u> Encourage development of appropriately-scaled renewable energy resources,
 - 7.1.1.5 Reduce greenhouse gas emissions, and
 - 7.1.2.47.1.1.6 Reduce transportation energy demand and single-occupant vehicle use.

7.2 Analysis of <u>Renewable</u> Energy Resources in Weathersfield (renewable resources)

Few households in town generate power or heat with small non-wood renewable energy systems. Weathersfield as a whole does not has a number of renewable energy systems currently operating. In 2022, these systems include 11 solar hot water systems, 1 windmill, 16 ground-mounted photovoltaic systems, 3 solar trackers, and 44 roof-mounted photovoltaic systems, according —to the —Vermont —Energy Dashboard (www.vtenergydashboard.org/energy-atlas). —These existing systems have a capacity of about 1.16 MW. Two additional larger ground-mounted systems have come on lineonline more recently than this data represents; one is off VT Route 106 in Perkinsville and another is at the Town Highway Garage. These two additional systems have capacity of an additional 1 MW. Tproduce any significant amounts of non wood renewable energy. However, the town has significant the potential for to generate additional renewable energy generation from any of the following renewable resources; biomass, geothermal, hydro, solar, and wind sources.

The Vermont Online Energy Atlas (as of 2016) is an excellent source of information regarding the availability and potential production of renewable energy resources in Vermont.

- 7.2.1 <u>Biomass:</u> The term "biomass" includes bio-diesel, perennial grasses, methane digesters, waste to energy, firewood, and woody biomass.
 - 7.2.1.1 Bio-diesel: Bio-diesel is a type of fuel made from vegetable oils, animal fats, or waste cooking oil. It may be used in its purest form or combined with petroleum diesel. It is biodegradable, nontoxic, far less polluting than fossil fuels and may be used in ordinary diesel engines with little or no modification. Bio-diesel may also be produced from waste cooking oil. There are several restaurants in Weathersfield that could provide small amounts of waste cooking oil for conversion to bio-diesel. Any biodiesel use in Weathersfield is by private users; no figures are readily available.
 - 7.2.1.2 Vegetable oils: Vegetable oils are derived from oilseed crops such as mustard, rapeseed, or sunflowers. There are no oilseed crops being produced in Weathersfield nor are there the facilities within a reasonable distance to convert the seeds to bio-diesel.
 - 7.2.1.3. Woody Biomass: Wood is used in a variety of forms to provide heat or to generate electricity. In the simplest form, wood from trees is split and sold for firewood for wood- burning stoves and furnaces in home heating. The Weathersfield School uses wood chips to heat the school. Wood pellets are also a popular way to provide home heating.

Studies show that burning woody biomass to generate heat is far more efficient than burning it to generate electricity. Additional challenges to using woody biomass for energy production on a large scale are truck traffic (large logging trucks), waste heat (if the biomass is used for electricity production), and carbon dioxide emissions.

According to the Atlas, there are 12,412 acres of wooded land in Weathersfield with an annual potential yield of 5,763 tons of available low grade wood, which are suitable for heat and/or biomass electricity production (0.464 tons Net Available Low Grade Wood (NALG)/acre x 12,412 acres = 5,763 tons of NALG wood). Logging should be done according to acceptable practices.

- 7.2.1.4. Perennial Grasses: There are problems associated with the burning of perennial grasses that must be taken into consideration when considering this fuel source. No perennial grasses are currently being grown in Weathersfield for energy use.
- 7.2.1.5. Methane Digesters: According to Green Mountain Power (GMP), Cow Power, "one cow can produce about 30 gallons of manure a day which, in turn, can generate enough electricity to power two 100-watt incandescent light bulbs for 24 hours. The waste from 4-6 cows will generate about 1 kw of electricity." (VT Renewable Energy Atlas). Weathersfield has a number of various types of livestock in town.—but no working dairy farms. There are currently no methane digesters in—the town.
- 7.2.2 <u>Geothermal: "Geothermal</u>, or ground source heating, is the direct use of energy absorbed from the sun at the earth's surface, and supplemented from the earth's core. Modern geothermal heating and cooling systems rely on the stable temperature of the earth (55 degrees Fahrenheit), or groundwater in a well, along with an electric heat pump. This technology is not currently financially feasible in Weathersfield.
- 7.2.3 <u>Hydro:</u> There are three potential sites in Weathersfield for hydroelectric power Stoughton Pond, Springfield Reservoir, and the Soapstone Dam on the Black River. The Vermont Energy Atlas estimates they have the potential to produce a total of 207 kW of power.

With the abundance of streams in Weathersfield, micro hydro-power (run-of-river) is another alternative that should be considered. Micro hydro-power generation requires as little as two gallons per minute of stream flow and does not require the usual reservoir associated with standard hydro_—power projects. Peak power production is in the winter when electricity demands are high.

Installation costs and maintenance fees are relatively small in comparison to other technologies.

- 7.2.4 <u>Solar:</u> Solar energy may be used to generate electricity or thermal heat. It may be stored on-site using batteries or sent to the grid via net-metering. Solar hot water does not require batteries or net--metering. There are an increasing number of net-metering sites in Weathersfield.
- 7.2.5 Wind: According to the U.S. Department of Energy Wind Program and the National Renewable Energy Laboratory, areas with annual average wind speeds of 21.3 ft/s (or 14.5 mph) and greater at a height of 262 feet are suitable for wind energy development. Their map shows the wind speeds in Weathersfield at this height average 16.4 ft/s (or 11.1 mph) and below.

7.2.6

- 7.2.5 Wind: The Vermont Department of Public Service has published a-map of potential wind resources at 98 feet for the state. shows only modest potential for utility- (70 meters or 230 feet tall at the hub) or commercial-scale (50 meters or 164 feet tall) wind power in town. Residential-scale (30 meters or 98 feet tall) wind appears to be the only reasonable option given prevailing wind speeds, land ownership, and proximity to three phase power lines. This map indicates Class 2 sites (17.1 19.4 ft/s or 11.6 13.2 mph) on Little Ascutney Mountain and in a small area southeast of the end of West Camp Hill Road. According to the U.S. Department of Energy, these wind speeds are insufficient for the generation of significant amounts of electricity.
- 7.2.77.2.6 Heat pumps: An increasing number of air source cold-climate heat pumps are being used in the town as a highly efficient source of heat and air conditioning. Cold-climate heat pumps are also referred to as air-source heat pumps, mini-splits or ductless heat pumps. These systems are a good option to retrofit existing houses, and can be used to supplement the existing heating system. They also provide air conditioning during the warmer months. Ground source (geothermal) heat pumps may also be suitable option. Heat pump water heaters are also an energy efficient option.
- 7.2.87.2.7Summary of Renewable Resources: In summary, it appears that there are several ways that Weathersfield residents and the town government could reduce their non-renewable, imported energy dependencies through the development and use of locally produced, renewable energy fuels.
- 7.2.97.2.8 All development of renewable energy in Weathersfield should be consistent with land use, conservation, and other goals described elsewhere in this plan.

7.3 Analysis of Non-Renewable Energy Resources in Weathersfield (non-renewable resources)

Fuel oil and propane for home heating, cooking, and hot water are delivered to Weathersfield residents from commercial sources outside the Town. The only reserves for home heating fuel in the Town are the storage tanks on municipal and private propertiesy.

Transportation is fueled primarily with gasoline or diesel fuel that is likewise imported to the Town by various distributors in the area. The only storage facilities in Town for any of these energy resources are the gasoline storage tanks at the gas stations in Town, and the storage tanks at the Town Highway Ggarage, and some atat some commercial and residential locations.

Electricity is brought to the majority of Weathersfield homes and businesses via the "grid." The electricity traveling in the grid is produced from both renewable and non-renewable sources. The Town is crisscrossed by numerous distribution and transmission lines belonging to both Vermont Electric Power Company (VELCO) and GMP. The substation in Ascutney was upgraded to a newer design that will be more reliable than the previous design.

7.4 Analysis of Energy Scarcity and Needs in Weathersfield

7.4.1 Scarcity

Weathersfield does not have any local sources of non-renewable energy. The scarcity or abundance of non-renewable sources is entirely dependent on factors beyond the town.

Weathersfield has a variety of local sources of renewable energy, as discussed in detail in Section 1.2 above. The scarcity or abundancepotential of renewable energy at each specific site will depend on the extent of the development of these renewable sourcessite conditions (e.g. solar access). Factors, such as droughts, may limit micro-hydro opportunities.

7.4.2 Needs

Weathersfield residents, like many Vermonters, are highly dependent on non-renewable energy, although each year residents and business owners invest in more renewable systems. Many are encouraged to do so with existing incentives through Efficiency Vermont or Green Mountain Power. Additional incentives are needed to encourage more residents to invest in energy efficiency improvements and renewable energy systems, especially for retirees and lower-income residents.

According to data compiled for a planning base year of 2015 by the Mount Ascutney Regional Commission, there were 76 businesses in town and it cost an average of \$3,159

a year to heat those business structures. The cost would be much higher in 2022 for fuel oil or propane systems, given the volatility of fuel prices.

Detailed numbers are not available for types of energy consumption in the Town of Weathersfield. However, Weathersfield is typical of Vermont, and figures for the entire state are available from the 2016 Comprehensive Energy Plan of the Vermont Department of Public Service.

In 2015, there were an estimated 2.633 registered vehicles in town. About 81% of residents drove to work alone. The average commute time was 24 minutes.

About ¾ of all electricity used in Weathersfield is for residences; the rest is used for non-residential uses. The average residence uses 7,211 KWh a year.

A chart from the Comprehensive Plan appears on the next page.

Table 4.1 from p. 28 of Comprehensive Energy Plan of 2016

7.5 Analysis of Energy Costs

To provide a complete or accurate analysis of energy costs, the <u>T</u>town must establish a baseline of energy costs from municipal buildings, vehicles, and operations and diligently maintain the database <u>so as toto</u> determine where energy costs may be stabilized or reduced.

Cost savings may be realized from:

- 7.5.1 Wweatherization of buildings
- 7.5.2 **Eenergy** efficient lighting

7.5.3 Hheating and air conditioning changes to more efficient 7.5.47.5.3 mechanisms, such as air—source cold climate heat pumps

7.5.57.5.4 Ceonservation measures (reduction in use)

7.5.67.5.5 Ffuel-efficient vehicles

7.5.77.5.6 Aanalysis of town vehicle operations

7.6 Analysis of Energy Problems in Weathersfield

The primary energy problems in Weathersfield are less efficient older homes and dependence on energy from outside the Town and less efficient older homes.

Commented [MC1]: Switched wording for clarity; otherwise may read as "dependence on less efficient older homes"

Problems could arise in the future as a result of energy projects, such as substantial truck trips generated by a large biomass power plant. The Teown should promote future energy projects, but also the carefully review the current and potential impacts of energy projects on costs, aesthetics, natural resources, and the environment.

There are specific areas where the Town's residents would not like to see overhead transmission lines or energy projects (other than roof-mounted solar) that have an undue adverse impact on important scenic resources. They are:

7.6.1 View of Mount Ascutney:

- from Route 131 near 9 Little Ascutney Road (formerly the Joe Stoughton house).
- from the Weathersfield Center Road near 478 Weathersfield Center Road (the Kamel residence).
- 7.6.2 View from the Weathersfield Center Road, looking west, near 2811 Weathersfield Center Road (Hunter Press).
- 7.6.3 View from Skyline Drive at the height of the land, looking east.
- 7.6.4 View of the Center Church and grove.

7.7 Energy Goals

7.7.1 To make efficient use of energy, provide for the development of renewable energy resources, encourage weatherization, and reduce emissions of greenhouse gases, prioritize energy efficient forms of transportation, and promote land use policies that are likely to result in energy conservation.

7.8 Energy Policies

7.8.1 Weathersfield has limited potential for utility-scale wind energy development, as areas with sufficient access to consistent wind are generally small in size and more than a mile away from three-phase power lines. The prime wind sites (e.g. Weathersfield Center, Butterfield Hill, Pikes Peak) are relatively close to established residences and/or specifically identified scenic, historic or natural resources in the Town Plan and/or Biologic Natural Areas of Weathersfield. The secondary wind sites (e.g. Skyline Drive, Hawks Mountain, Little Ascutney, Pierson Peak, Mount Ascutney) are largely in scenic or natural resources areas also specifically identified in the Town Plan and/or Biologic Natural Areas of Weathersfield. Development in these areas would have a profoundly negative impact on critical viewsheds throughout the community, as the natural profile of the mountain forms an

iconic backdrop from both in-town and rural valley locations. Because no other locations in Weathersfield have suitable wind resource, infrastructure availability, or are free from significant environmental constraints (Figure 6), no utility-scale (100 KW capacity or greater) wind energy facilities should be located in the town. Smaller scale wind projects, including residential-scale turbines (generally less than 10 KW) and turbines that may be installed at farms, residences or small businesses, up to 100 KW, may be appropriate as long as noise from the turbines does not adversely affect neighboring residential properties and as long as they are not prominently visible from any town-identified historic district.

- 7.8.2 The Ttown particularly encourages solar energy development, of any scale, on building rooftops.
- 7.8.3 The <u>T</u>town strongly supports the development of <u>residentialsmall</u>-scale (<u>up</u> <u>to</u> 150 KW capacity <u>ground-mounted or less</u>)_electricity generation from solar energy at homes, businesses, schools, and other institutions.
- 7.8.4 The Tłown strongly encourages community solar projects (between 15 KW and 150KW in size) provided they are located on sites identified as having high potential for electricity generation based on solar resource availability and avoid "prohibited areas" as identified below. Moreover, any community solar project located on a site that is not a prohibited/exclusion area shall be considered as being located on a "preferred site" and eligible for all of the regulatory and financial incentives associated with larger scale solar energy installations pursuant to Public Utility Commission Rule 5.100 and 30 V.S.A. Section 248.
- 7.8.5 Any larger scale solar development (greater than 150 kW capacity) shall be subject to the following Solar Energy Facility Siting Policy and Map, and the Solar Electric Facility Siting Guidelines.

7.8.6 Solar Energy Facility Siting Policy and Map

The Solar Energy Resource Map shall serve as a guide for developers wishing to identify land suitable for larger-scale solar energy generation facilities (greater than 150 kW capacity) within the Town of Weathersfield. This map identifies sites which have been determined by the Town of Weathersfield, through official action of the Select Board, to be suitable for solar facilities and sites which are not suitable due to the presence of constraints. Only sites identified as "preferred sites" (on this map or through the Town of Weathersfield's Preferred Site Policy) or located in a "preferred area" as defined in the Solar Facility Siting Criteria, below, may be developed with solar generating facilities in excess of 150 KW-of rated capacity.

The Solar Energy Resource Map shall be used in concert with the Town's Solar Facility Siting Guidelines (incorporating the Community Standards and Siting Criteria) included in this section of the Town Plan to direct the development and design of solar facilities. Although solar energy development at these preferred sites and locations is an appropriate land use, all such development shall be carefully planned to limit adverse impacts to neighboring properties and to public viewsheds, giving consideration to The Town's Solar Facility Siting Guidelines.

The sites indicated on this map as suitable for solar energy development were selected after a thorough analysis of available geographic data, including an assessment of access to solar energy as well as environmental, aesthetic, cultural, and related regulatory constraints. State-identified environmental constraints are discussed in more detail in the Mount Ascutney Regional Energy Plan, and include the following resource areas:

- a) Class 1 and 2 wetlands, vernal pools, and hydric soils;
- b) Mapped river corridors and FEMA-defined floodways;
- c) Natural communities and rare, threatened, and endangered species;
- d) Federal wilderness areas;
- e) "Primary" and "Statewide" significant agricultural soils;
- f) FEMA-defined special flood hazard areas;
- g) Lands protected for conservation purposes;
- h) Deer wintering areas; and
- State-identified high priority "Conservation Design Forest Blocks."

Commented [JR2]: Check

7.8.7 Solar Electricity Facility Siting Guidelines

The term "solar facility" shall have the following meaning: a solar electricity generation and transmission facility with a 150kW (AC) or greater capacity, including all on-site and offsite improvements necessary for the development and operation, and on-going maintenance of the facility.

The Town of Weathersfield has developed community standards and siting standards for the development of solar facilities for reference and use by facility developers and local property owners and for consideration in Section 248 proceedings (30 VSA §248). These standards are set forth below. In addition, the Weathersfield Planning Commission, in consultation with the Mount Ascutney Regional Commission, has identified and mapped (Figure 7) those areas of Weathersfield that are most suitable for solar facility development based on facility siting requirements and municipal energy,

conservation, and development policies and objectives set forth in the Weathersfield Town Plan.

Commented [JR3]: Mapping in progress

7.8.7.21 Community Standards

The following community standards are to be considered in undertaking municipal solar electricity projects and programs, in updating Weathersfield's Zoning Bylaws to address solar facilities subject to local regulation, and in the review of any new or upgraded solar facilities in excess of 15 kW capacity, by the Town of Weathersfield and the Public Utility Commission (Section 248 review).

- a) **Plan Conformance**: New solar facilities and proposed system upgrades should be consistent with the Vermont Comprehensive Energy Plan, the Vermont Long-Range Transmission Plan, and utilities Integrated Resource Planning (IRP).
- b) Benefits: A demonstrated statewide public need that outweighs adverse impacts to local residents and resources must be documented for municipal support of new solar facilities located within or which may otherwise affect Weathersfield. Facility development must benefit Town of Weathersfield and State residents, businesses, and property owners in direct proportion to the impacts of the proposed development.
- c) Impacts: New solar facilities must be evaluated for consistency with community and regional development objectives and shall avoid undue adverse impacts to significant cultural, natural, and scenic resources and aesthetic values identified by the community in the Weathersfield Town Plan and the Scenic Resources Inventory. When evaluating impacts of a proposed solar facility under the criteria set forth in this Town Plan, the cumulative impact of existing solar facilities, approved pending solar facilities, and the proposed solar facility shall be considered. It is explicitly understood that a proposed solar facility which by itself may not have an adverse impact may be deemed to have an adverse impact when considered in light of the cumulative impacts of the proposed solar facility and existing solar facilities and pending already approved solar facilities.
- d) **Decommissioning**: All facility certificates shall specify conditions for system decommissioning, including required sureties (bonds) for facility removal and site restoration to a safe, useful, and environmentally stable condition. All hazardous materials and structures, including foundations, pads, and accessory structures, must be removed from the site and safely disposed of in accordance

with regulations and best practices current at the time of decommissioning.

7.8.7.32 Solar Facility Siting Criteria

Weathersfield supports development of solar energy generation facilities consistent with the policies and guidelines set forth in this plan. It recognizes that financial considerations require projects to be located in close proximity to electric power lines capable of distributing the load proposed to be generated and to have convenient access from major transportation networks for construction. However, the Ttown desires to maintain the open landscape and scenic views important to Weathersfield's sense of place, tourism economy, and rural cultural aesthetic. Not all solar facilities proposed can meet this standard. Projects must meet the following criteria in order to be supported by this Town Plan:

- a) Siting Requirements: New solar facilities shall be sited in locations that do not adversely impact the community's traditional and planned patterns of growth; of compact village centers surrounded by a rural countryside, including working farms and forest land. Solar facilities shall, therefore, not be sited in locations that adversely impact scenic views, roads, or other areas identified in the Scenic Resources Inventory, nor shall solar facilities be sited in locations that adversely impact any of the following scenic attributes identified in the Scenic Resource Inventory: views across open fields, especially when those fields form an important foreground; prominent ridgelines or hillsides that can be seen from many public vantage points and thus form a natural backdrop for many landscapes; historic buildings and districts and gateways to historic districts; and, scenes that include important contrasting elements such as water. The impact on prime and statewide agricultural soils currently in production shall be minimized during project design.
- b) Preferred Areas: The following areas are specifically identified as preferred areas for solar facilities, as they are most likely to meet the siting requirements:
 - Roof-mounted systems;
 - Systems located in proximity to existing large scale, commercial or industrial buildings;
 - Proximity to existing hedgerows or other topographical features that naturally screen the entire proposed array;
 - Reuse of former brownfields:

Commented [JR4]: Too broad and open to interpretation?

- Facilities that are sited in <u>previously</u> disturbed areas, such as gravel pits, closed landfills, or former quarries;
- Areas specifically identified as suitable for solar facilities on the Solar Energy Resource Map.
- c) Prohibited (Exclusion) Areas: In addition to those areas that do not meet the siting requirements set forth above, development of solar generating facilities shall be excluded from (prohibited within), and shall not be supported by the Town, in the following locations:
 - Floodways shown on Flood Insurance Rate Maps (FIRMs);
 - River corridors as shown in the Town of Weathersfield Zoning Bylaws;
 - Class I or II wetlands;
 - A location that would significantly diminish the economic viability or potential economic viability of the town's working landscape, including productive forest land and primary agricultural soils (as defined in Act 250 and as mapped by the U.S. Natural Resource Conservation Service);
 - Rare, threatened, or endangered species habitat or communities as mapped or identified through site investigation, and core habitat areas, migratory routes and travel corridors;
 - Ridgelines and significant vantage points:
 - Steep slopes (>25%);
 - Surface waters and riparian buffer areas (except for stream crossings);
 - Topography that causes a facility to be prominently visible against the skyline from public and private vantage points such as roads, homes, and neighborhoods;
 - A site in proximity to and interfering with a significant viewshed identified in the Scenic Resource Inventory (see Section 7.6 and Section 5.3);

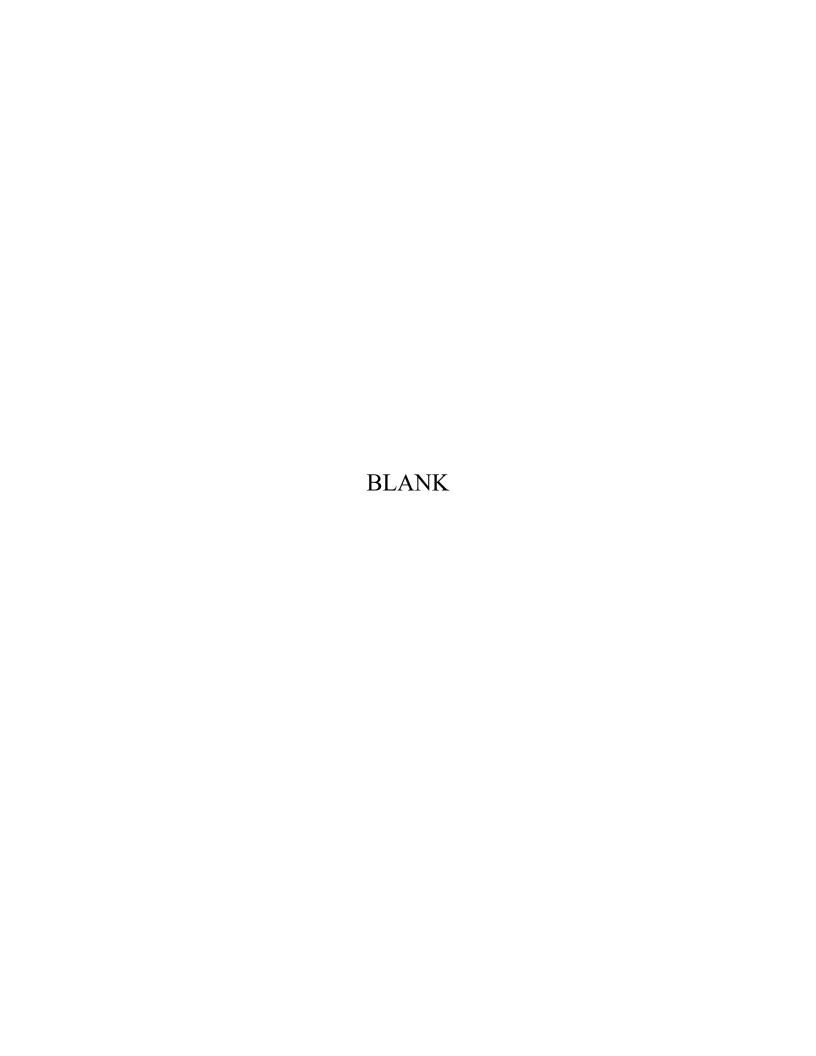
 - A site that causes adverse impacts to historical or cultural resources, including state or federal designated historic districts, sites and structures, and locally significant cultural resources identified in the municipal plan. Prohibited impacts to historical and cultural resources include:
 - **FR**emoval or demolition;

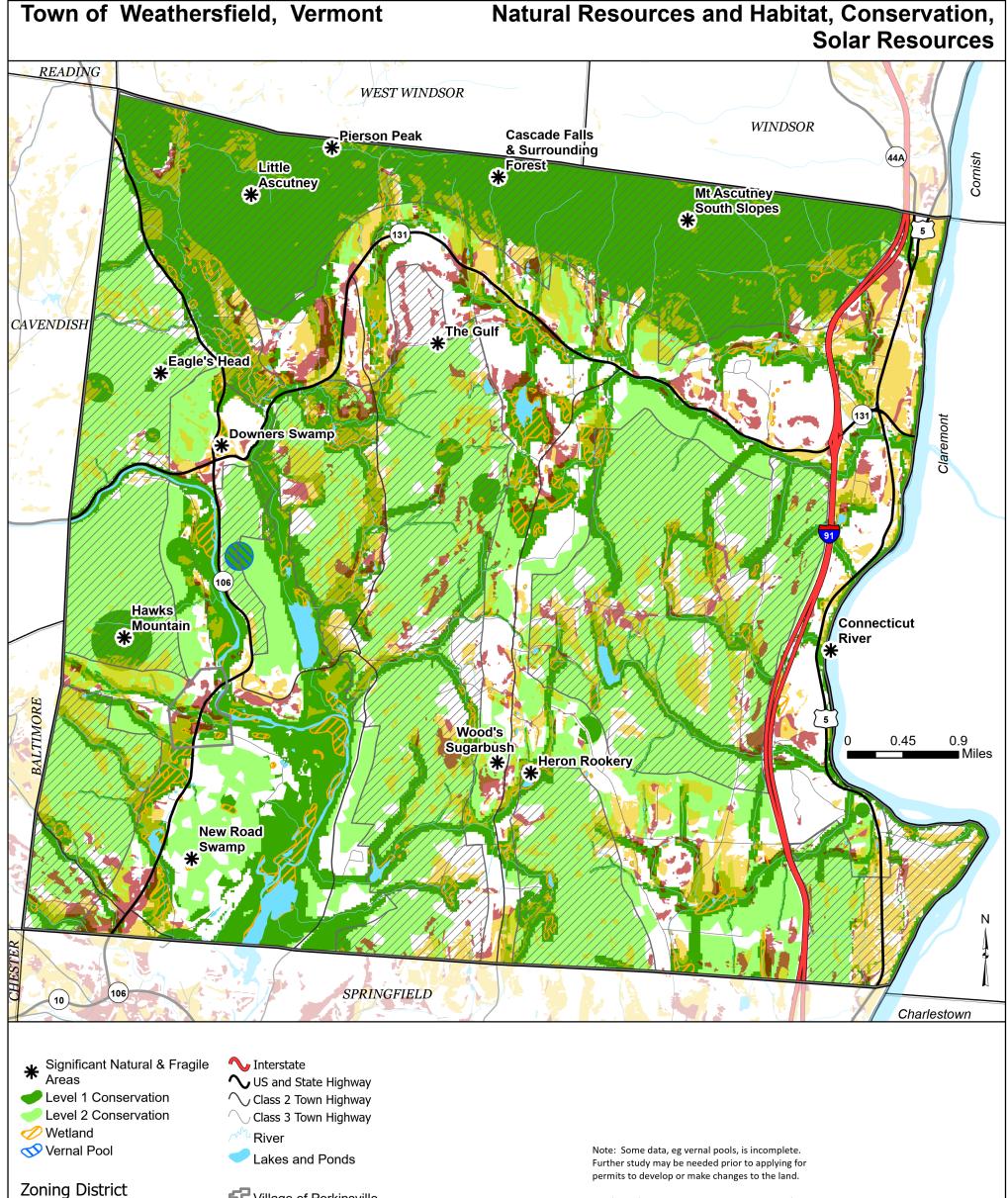
- ¬Physical or structural damage, significant visual intrusion, or threat to the use;
- SSignificant intrusion in a rural historic district or historic landscape with a high degree of integrity;
- Significant visual intrusion into a hillside that serves as a backdrop to a historic site or structure;
- eCreating a focal point that would disrupt or distract from elements of a historic landscape;
- aA significant intrusion in a rural historic district or historic landscape that has a high degree of integrity;
- Impairing a vista or viewshed from a historic resource that is a significant component of its historic character and history of use;
- <u>₩</u>Isually overwhelming a historic setting, such as by being dramatically out of scale;
- ilsolating a historic resource from its historic setting, or introducing incongruous or incompatible uses, or new visual, audible or atmospheric elements.
- d) Mass and Scale: Except for projects located on preferred sites, solar facilities larger than 10 acres, individually or cumulatively, cannot be adequately screened or mitigated to blend into the municipality's landscape and are, therefore, explicitly prohibited.
- 7.8.8 Energy audits should be conducted prior to undertaking major improvements to Town-owned buildings, and the Town should invest in priority energy efficiency upgrades as called for in energy audit.
- 7.8.9 All applicable new and renovated buildings are subject to the Vermont
 Residential Building Energy Standards or Vermont Commercial
 Building Energy Standards.
- 7.8.10 The Town encourages other methods to exceed the state energy code, such as through passive solar building orientation to take advantage of heating from the sun, landscaping to shade buildings and reduce summer temperatures, or using the "Energy Star" building performance rating system.
- 7.8.11 The current land use pattern requires people to drive to work and other amenities; encourage new housing, businesses, and other amenities in walkable/centralized areas. The reduction of sprawl and low-density development not only reduces energy consumption, but also can improve the local and regional economy. Refer to Future Land Use Map.

7.9 Energy Recommendations

- 7.9.1 Consider adopting a freestanding solar screening bylaw under 24 V.S.A. §4414 (15).
- 7.9.2 The Town of Weathersfield may participate in the Public Utility Commission's review of new and expanded generation facilities to ensure that local energy, resource conservation, and development objectives are identified and considered in proposed utility development. This may include joint participation and collaboration with other affected municipalities and the Mount Ascutney Regional Commission for projects that may have significant regional impact. It is acknowledged that the PUC's primary focus is on administering state public policy and regulating actions that are directed at ensuring that utility services promote the general good of the state.
- 7.9.3 The Planning Commission, in consultation with the Select Board, should develop guidelines to direct local participation in Section 248 proceedings related to solar facilities located in Weathersfield or in neighboring communities which may affect the town. The guidelines should reflect levels of participation or formal intervention in relation to the type, location, scale, operation, and magnitude of a proposed project, and its potential benefits, detriments to, and impacts on the community.
- 7.9.4 Inform residents about Efficiency Excellence Network (EEN) contractors by providing links to EEN information through a municipal website or through other means.
- 7.9.5 Participating in the Safe Routes to School program will help reduce reliance on vehicle transport.
- 7.9.6 Inform residents and business owners about existing energy efficiency programs and incentives, especially weatherization services and financing options for low-to-moderate income household.
- 7.9.7 Appoint an Energy Coordinator or establish an Energy Committee to help implement recommendations in this Chapter.
- 7.9.8 The Town of Weathersfield should actively support programs that identify older buildings with energy inefficiencies, and provide funding for weatherization of homes, particularly of lower-income or vulnerable residents. Older buildings will benefit from air-sealing, insulation, and other weatherization work. Weatherization has been shown to have positive health benefits such as lower rates of asthma and respiratory illness.

- 7.9.9 Hold an information forum such as Button Up, and invite residents to speak about the energy improvements that they have made to their homes. Provide data that demonstrates why these improvements make sense for residents.
- 7.9.10 Assess the life cycle costs of potential energy improvements during design and construction planning. For example, investment in a new, efficient heating system may be more expensive up front, but more economical to operate over time.
- 7.9.11 Promote and support the Green Saving Smart program to teach financial literacy and help residents understand/maximize the cost-saving options available to them.
- 7.9.12 Promote the use of cold climate heat pumps with education/presentations in coordination with the EEUs/electric utilities.
- 7.9.13 Promote the Go Vermont webpage, which provides rideshare, vanpool, public transit and 30 park-and-ride options.
- 7.9.14 Seek grants and partnerships to fund the installation of electric vehicle charging infrastructure at town-owned properties.
- 7.9.15 Coordinate with MARC and Local Motion to promote the planned electricbicycle lending library to help promote e-bikes as a viable form of travel.
- 7.9.16 Continue to financially support The Moover public transportation services, such as the commuter bus that serves the I-91 Exit 8 park and ride lot, to provide access to jobs for residents and encourage less single-occupant vehicle use.
- 7.9.17 The Town should work with electric and utility contractors to assist homeowners with switching to alternative heating systems such as wood pellet stove and air source heat pumps. Woody biomass can be sourced locally.
- 7.9.18 If renewable energy systems are not practicable, encourage homeowners to replace old furnaces or boilers with a high-efficiency model.
- 7.9.19 Promote wood stove change-out programs that take older non-EPA certified stoves out of service and replace them with more efficient and lower emitting cordwood or pellet stove.
- 7.9.20 Continue to maintain the existing trail networks for walking and other suitable uses.





Conservation 10 - C10

Prime solar resource Secondary solar resource Village of Perkinsville Weathersfield Boundary

Other Town Boundaries

Level 1 and 2 conservation areas were mapped following advice from Jens Hilke, Vermont ANR in October 2014.

Level 1 Conservation Area includes:

- Rare, threatened or endangered species (Biofinder Tier 1), updated with most recent data available through ANR
- Significant natural communities (Biofinder Tier 2) - Riparian Areas (Biofinder Tier 3)

- High priority natural sites (E. Thompson 1992)

Level 2 Conservation Area includes: - Large blocks (i.e. over 500 acres) of undeveloped contiguous forest habitat areas and connecting wildlife travel corridors (Biofinder Tiers 4 and 5)

Information on Biofinder - http://biofinder.vt.gov/

Data Sources: Significant Natural and Fragile Areas (Digitized approximately from map in Biological Natural Areas of Weathersfield, VT by Elizabeth Thompson. August 1992), Vernal Pools (SN6 component of Biofinder 2013), Threatened and Endangered Species (ANR 2015), Biofinder (ANR 2013), Wetlands (VSWI, ANR 2010), Town & Village Boundaries (VCGI 2012 & NHGranit 2009), Waterbodies and Watersheds (VHD 2008), Zoning (CAI 2013),

VT State Plane, Meters, NAD 83

For planning purposes only. Not for regulatory interpretation.

Data depicted on this map is based on best available information.



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Map Drawn 01/26/2022