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April 11, 2024
Re: Island Heritage Trust
Barn Renovation Green Building

The following bullet points represent a summary of the elements of the proposed barn renovations and addition that would be considered an element of green building. Although I have not attributed credit points to each of the items below, I have generally used the LEED rating system a framework to select and describe them. Just to be clear this is not a LEEL building.

Before listing the specific items, I would like to describe the general approach to these green building aspects that is very important to its functioning as intended. Any building is a system composed of subsystems that need to work together to achieve success. For example, there is not one kind of insulation that is best, all have their uses and it will depend on the location, type and construction of the air barrier to keep moisture from condensing and ultimately destroying the structure.

1. Sensitive land protection – to avoid the development of sensitive lands and reduce the environmental impact locate the development footprint on land that has been previously developed.
2. Light pollution reduction – to increase night sky access, improve nighttime visibility, and reduce the consequences of development for wildlife and people meet up-light and light trespass requirements.
3. Indoor water use reduction – to reduce indoor water consumption reduce aggregate water consumption use water saving fixtures.
4. Optimize energy performance – to increase energy performance beyond the standard and reduce the harms associated with excessive energy use increase the building insulation, reduce unwanted heat gain, reduce air exfiltration, and provide efficient heat and A/C systems. To this end the building has an increased amount of insulation, a continuous interior air barrier, an efficient heat and A/C system, and an energy recovery ventilation system.

5. Renewable energy production – to reduce the environmental and economic harms associated with fossil fuel energy by increasing self-supply of renewable energy, in this case a solar system.
6. Historic building reuse – to renovate and adapt to reduce the life-cycle impact of development. Renovating a building can be much less carbon emissions intensive than building new.
7. Enhanced indoor air quality strategies – to promote occupant comfort by improving indoor air quality through the use of an energy recovery ventilation system that exhausts old indoor air and brings in outside air exchanging the energy but not mixing the air streams.
8. Low emitting materials – to reduce concentrations of chemical contaminants that can damage air quality, human health, and the environment only use low, or no, VOC products.
9. Interior lighting quality and control – to promote occupants' comfort and well being provide high quality lighting and accessible controls.