## ENERGY CONSIDERATIONS CHECKLIST (November 27, 2011) Planning & Community Development and Code Enforcement Offices Town Hall, 15 Newmarket Road, Durham, NH 03824; 603-868-8064



## -PURPOSE -

This checklist was developed by the Durham Energy Committee together with the Durham Planning Board. It is intended to encourage developers, applicants for Site Plan Review, applicants for building permits, and members of the Durham Planning Board to consider and discuss optional energy efficiency measures appropriate to a specific application rather than to mandate general requirements. Discussion at early stages may result in opportunities for energy and cost savings.

Project name  Date of Submittal				25-33 Main Street					
			tal	9/19/13					
Applicant name Engineer name Architect name				Orion UNH LLC. TBD					
								■ New Construction □ Re-Development, Addition or Renovation	
PAR	TI. E	BUILD		ONSTRUCTION, SYSTEMS AND MATERIALS Onal Accredited Rating for Building Energy System					
Char	ok one	hovi							
Check one box: 1			- 1	Passive House Institute* <a href="http://www.passivehouse.us/passiveHouse/PHIUSHome.html">http://www.passivehouse.us/passiveHouse/PHIUSHome.html</a>					
				International Living Building Institute/Living Building Challenge* <a href="http://living-future.org/lbc">http://living-future.org/lbc</a> LEED* (Platinum, Gold, Silver) <a href="http://www.usgbc.org/">http://www.usgbc.org/&gt;</a>					
₹				Energy Star* <a href="http://www.energystar.gov/">http://www.energystar.gov/&gt;</a>					
n		٥		Other  [please indicate Internet address or other reference]  * These organizations have established energy-efficiency criteria. Qualifying applicants are encouraged to					
				complete and attach the checklist from that certification (to be used for informational purposes only) and may then skip to Part IV, "Consultation with Director of Zoning, Building Codes & Health."					
(1				None of the above					
Yes	No	N/A	Ener	gy performance and insulation					
	<b>W</b>			Attic or ceiling insulation exceeds Town code (R value proposed = 49) (see Chapter 38)					
			3						
			4						
<b>X</b>			5	Company of the Compan					
<b>Y</b>				Basement foundation: R value proposed 7.5					
				Hot water pipes: R value proposed					
			8						
	4		9	Plans to commission the building to confirm performance					
				* "Tight" envelopes require ventilation, typically with the use of energy or heat recovery ventilation systems.					

Yes	No.	N/A	Constr	ruction methods and materials
	1			Net zero construction, i.e., building(s) uses less than or same amount of energy it generates
✓			11 E	Energy efficient doors and windows (including screens)
			12 F	Recycled content materials
Vac	Ma	N/A	Interne	al avatama
Yes	No.			al systems .ow-flow plumbing fixtures
3				ighting: high efficiency
<u> </u>	3	. —		Energy usage monitoring system(s)
3				Energy-efficient appliances (refrigerators, stoves, air conditioners, ceiling fans, etc.)
<b>-</b>				Energy-efficient HVAC system (proposed efficiency level)
	3	<u> </u>		Renewable HVAC system (e.g., biomass boiler or furnace) or geothermal
	<u> </u>			Renewable hot water system (e.g., solar thermal)
<del>-</del>	<u> </u>			Photovoltaic renewable electricity generation system (i.e., solar panels)
<del>-</del>	<u> </u>			Vindow technology or design that adjusts shading (active or passive, e.g., film, sensors)
<u> </u>	<u> </u>	<u> </u>		
<u> </u>	3			Ability to charge electric vehicles  Grey-water system (e.g., to capture water from sinks or showers to use for toilets or flower gardens)
				Mechanical ventilation: Energy Recovery Ventilator efficiency proposed =
	<u> </u>			Vater usage monitoring system(s)
	₩.			Cooling load reduction features, e.g., ceiling fans, solar-ray-blocking blinds
	W			
	¥	O O		
			AND SITII	NG CONSIDERATIONS (if not applicable, check here)
PAR	T II.	SITE A	AND SITII Solar lig	
PAR' Yes	T II.	SITE A	AND SITII Solar lig 27 P	NG CONSIDERATIONS (if not applicable, check here) ghting, heating and cooling (passive and active)
PAR Yes	T II.	SITE A	Solar lig 27 P 28 S P	NG CONSIDERATIONS (if not applicable, check here)  ghting, heating and cooling (passive and active) Passive solar lighting design (optimizes natural illumination for interiors)  Solar access: availability of, or access to, unobstructed, direct sunlight, usually south-facing Preservation of abutting solar rights, e.g., solar skyspace easements applicable to all plots within a
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PAR' Yes  Yes  Yes	T II.	N/A  D  N/A  N/A  N/A	Solar liq 27 P 28 S 29 s 30 C 31 D 32 W 33 V Parking 34 In 35 C	NG CONSIDERATIONS (if not applicable, check here  ghting, heating and cooling (passive and active) Passive solar lighting design (optimizes natural illumination for interiors) Solar access: availability of, or access to, unobstructed, direct sunlight, usually south-facing Preservation of abutting solar rights, e.g., solar skyspace easements applicable to all plots within a subdivision or to your neighbors Orientation of internal streets allows solar access Deciduous trees that provide shade in summer and do not block solar gain in winter Vindow placement maximizes winter solar penetration and minimizes solar penetration in summer (regetated rooftop(s), also known as a "green roof"
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PAR' Yes  Yes  Yes	No No No O	N/A  N/A  N/A  N/A	Solar lig 27 P 28 S 29 si 30 C 31 D 32 W 33 V Parking 34 In 35 C 36 A Transp 37 P 38 B	NG CONSIDERATIONS (if not applicable, check here  ghting, heating and cooling (passive and active)  assive solar lighting design (optimizes natural illumination for interiors)  colar access: availability of, or access to, unobstructed, direct sunlight, usually south-facing  areservation of abutting solar rights, e.g., solar skyspace easements applicable to all plots within a  ubdivision or to your neighbors  crientation of internal streets allows solar access  deciduous trees that provide shade in summer and do not block solar gain in winter  Vindow placement maximizes winter solar penetration and minimizes solar penetration in summer  (regetated rooftop(s), also known as a "green roof"  g  neentives for tenants without cars ("no free parking")  compact car space designation  advanced technology and/or alternative fuel car space designation (e.g., hybrids; "E85")  cortation, accessibility, connectivity  redestrian sidewalk network within the project area
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				IS AND MAINTENANCE (if not applicable, check here)
Yes	No	N/A		Iscaping
				Town water use results in lower electricity demand at water and wastewater treatment plants.
	Ø			Rainwater storage, e.g., cisterns
<b>4</b>				Existing vegetation or native species plantings
N/	. 🗆			Xeriscaping (low-water-demand plants)
3				Low-nitrogen-demand turf grass
V			45	Rain garden ("bioretention system") to manage stormwater runoff from roofs, driveways, parking areas
	-/		Cove	enant terms (e.g., for homeowner associations) allow:
<u> </u>	4			Outdoor clotheslines
	¥		47	Installation of outdoor energy-efficiency devices, such as solar panels
PAR	T IV.	CONS	ULTAT	ION WITH DIRECTOR OF ZONING, BUILDING CODES & HEALTH
		COMO	OLIAI	ISK WITH BIRESTOR OF ZORING, BOILDING CODES & HEALTH
Preli	minai	ry and	follow-i	up consultations help solve problems and reduce costs
Yes	No	N/A	Met v	vith Town's Director of Zoning, Building Codes & Health
	¥		48	Date:
				Notes from consultation:
190				
				Signature of Town's Director of Zoning, Building Codes & Health: