Appendix E: BLCPDA Design Standards, Sustainability Objectives, and Deed Restrictions

A. Introduction

Hudson River Valley Resorts' (HRVR) vision is to sustainably redevelop the Site as a resort residential community focused on the outdoors and wellness. HRVR's conservation development approach will serve as model for responsible land stewardship, energy efficiency, habitat protection and resource conservation. To fulfill this vision, the Applicant has defined specific design standards that ensure conformance to the BLCPDA zoning objectives, while allowing flexibility to encourage innovative site planning and design.

These Design Standards shall be incorporated into the design of individual site plans for each building phase. Prior to construction, the Applicant will establish an Architectural Review Board to oversee compliance with Design Standards.

The Applicant has also initiated the definition of sustainability objectives and environmental performance metrics. The Applicant understands that environmental sustainability requires long-term commitment and a 'cradle to cradle' approach. Sustainability objectives must inform initial stages of design and planning, minimize impacts during construction and create enforcement mechanisms for the long-term management of the community. End users, whether resort staff, guests or home-owners, will require ongoing sustainability education as well as means to be held accountable.

The principle mechanism to ensure compliance with sustainability standards is the Project's commitment to participate in one or more of the following or substantially similar green building certification standards: LEED, Living Building Standards, Green Globes, Energy Star, National Association of Homebuilders Model Green Home Building Guidelines, Audubon Signature Program, etc. All resort buildings and all residences will be designed and built as high-performance buildings. At present (2013), the Project has committed to certify the hotel lodge and spa buildings under the US Green Building Council's Leadership in Energy and Environmental Development (LEED) program.

Deed restrictions will further ensure long-term implementation of environmental objectives by the resort operator, resort guests, employees, homeowners, and visitors. Deed restrictions will be developed as part of the Site Plan application process and will be enforced by the Property Owner's Association. Deed restrictions will run with the land.

The combination of design standards, sustainability objectives, and deed restrictions will help ensure the Project meets its objectives of low-impact development that respects the natural environment.

B. Design Standards

The Design Standards below are a component of the Binnewater Lakes Conservation Planned Development Area (BLCPDA). Conformance with these Design Standards will ensure the development standards and general design guidelines of the BLCPDA zoning are met, while allowing flexibility to encourage innovative site planning and design. The Design Standards cover the following topics and apply to the commercial and residential components of the Project:

1. Site Planning;
2. Site Layout;
3. General Character of the Built Environment;
4. Building Design;
5. Pedestrian and Vehicular Access and Circulation;
6. Parking Layout and Design;
7. Streetscapes;
8. Landscaping and Screening;
9. Lighting; and
10. Signage.

BLCPDA DESIGN STANDARDS

1. Site Planning

    a. Intent

    Proposed development shall minimize the area of construction disturbance to the extent practical by focusing a majority of development in areas of historic disturbance, favoring a clustered development design, and/or restricting tree and vegetative clearing. Proposed development should respect and maintain the natural topography and avoid areas of sensitive natural resources to the extent practical.

    b. Design Guidelines and Standards

        i. Grading Plan. Where significant topographical issues are identified, (substantial differences in grade on site), the Applicant shall ensure the proposed grading plan conforms to SEQR Findings.
        ii. Respect the Natural Topography. To the extent feasible, the layout shall follow and respect the natural topography of the site. Berms, channels, swales, and similar man-made changes to the landscape shall be designed and graded to be an integral part of the natural landscape and to provide a smooth transition in changes of slope.
        iii. Limits on Graded or Filled Man-Made Slopes. The maximum slope of any man-made slope shall be 3:1.
        iv. Site Drainage Patterns. Site drainage patterns shall be designed to prevent concentrated surface drainage from collecting on, and flowing across pedestrian paths, walks, and sidewalks.
        v. Avoid wetlands and water bodies. Proposed development shall be setback a minimum of 50 feet from wetlands and waterbodies and a minimum of 100 feet from regulated wetlands.
        vi. Limit grading and tree clearing. Grading and tree clearing during construction shall not exceed a ten-foot buffer around buildings and roads unless unusual site conditions require a reasonable extension.

2. Site Layout

    a. Intent

    Site Layout shall create a sense of place that honors the land use history of the Site while conserving its natural resources. The layout shall promote pedestrian circulation and ensure safe vehicular circulation patterns. Parking areas shall provide safe and efficient

access to buildings. The overall layout shall create a coherent development pattern of visual and aesthetic interest.

b. Design Guidelines and Standards
    i. Clustered Development. To the extent practical, buildings shall be clustered to minimize site disturbance.
    ii. Historic Resources. Proposed development shall retain, preserve and/or interpret historic resources, particularly Rosendale Cement era historic resources.
    iii. Pedestrian Circulation. See Section 5 of this document ("Pedestrian and Vehicular Access and Circulation")
    iv. Parking. See Section 6 of this document ("Parking Layout and Design")
    v. Visual and aesthetic interest. The layout shall, at a minimum, create no significant adverse visual impacts, as determined during SEQR review. The layout should, to the extent practical, create a cohesive visual identity, attractive outdoor spaces and buildings of architectural interest.

3. General Character of Built Environment

a. Intent
Create an identifiable and cohesive design character by utilizing a limited vocabulary of design features that reinforce the notion of a wellness and outdoor focused retreat to nature. Design buildings and landscaping to create an identifiable resort image rather than a disparate collection of individual components.

b. Design Guidelines and Standards
    i. Authentic, Site-Specific Architecture. The Project design shall use an attractive aesthetic inspired by contemporary design and regional vernacular – in consonance with the natural environment and the local community.
    ii. Natural, Locally Sourced Building Materials. The Project shall use natural building materials sourced locally to the maximum extent feasible.
    iii. Cohesive Architecture. Employ a cohesive architectural style with a compatible diversity of building forms and shapes to add character and interest.
    iv. Quality Materials. Use high quality exterior construction materials and products.

4. Building Design

a. Intent.
Design high-performance buildings of architectural quality and high aesthetic value. Incorporate sustainable building practices and technologies to preserve natural resources.

See Appendices E-4 ("Representative Photographs of Single-Family Homes") and E-5 ("Representative Photographs of Multi-Family Homes"). These photographs are intended to communicate representative architectural elements and style (integration within the landscape, color palette, etc). Building types, specific design vocabulary and architectural styles will be determined during detailed design.

b. Design Guidelines and Standards
   i. Building Heights, Lot Sizes and Setbacks. See Table 1.

Table 1: Maximum Building Heights, Lot Sizes and Setbacks	
Maximum Building Height	
Hotel Lodge	75 feet or 5 stories
All other Commercial Buildings	45 feet or 3 stories
Residential Buildings	45 feet or 3 stories
Residential Lot Sizes and Setbacks	
Maximum lot coverage (all buildings, structures, paved/ concrete surfaces)	No more than 40% of lot area
Single-Family Residences	
Minimum lot size	22,000 *sf*
Minimum setbacks for any structure	15 feet (front); 25 feet (rear); 10 feet (side)
Multi-Family Residences	
Maximum density	15 units per acre
Minimum setbacks for any structure	20 feet (separations); 20 feet (front); 25 (rear)

   ii. Building Massing and Façade Treatment. Building designs shall incorporate varied and well-articulated facades that avoid monotonous unbroken planes or unrelieved repetition in the form and shape of structures and provide visual interest that will be consistent with the Project's identity, character and scale.
   iii. Building Materials/ Colors.
      a) To the extent practical, reuse materials found or salvaged on-site (demolition materials, limestone, timber, mulch, etc.).
      b) To the extent practical, source Forest Stewardship Council certified wood products.

c) Select colors for building exteriors that are muted and consonant with the natural landscape.

iv. Energy Efficiency.

a) Design high thermal efficiency buildings (new buildings to exceed code requirements at the time of construction).
b) Employ high efficiency fixtures, appliances and mechanical systems.
c) To the extent practical, employ on-site renewable energy sources.

5. Pedestrian and Vehicular Access and Circulation

a. Intent

Create a pedestrian-focused design to ensure convenient pedestrian circulation patterns between buildings and amenities within the Site. Provide safe, efficient, and convenient vehicular circulation patterns. Create a safe, clear, continuous network of pedestrian walkways within and between developments such that pedestrians will feel more inclined to safely walk within the Site.

b. Design Guidelines and Standards

i. Pedestrian Access and Circulation.

a) Pedestrian Walkways. A system of pedestrian walkways shall be designed to provide direct access and connectivity between the primary entrance or entrances to commercial buildings, residences and recreational amenities
b) Minimum Walkway Width. Pedestrian walkways shall be a minimum of 5 feet wide. Surfaces, materials, colorations and perviousness will vary depending on the walkway location and function. However, surfaces will include a combination of poured concrete, pavers, oil and stone, stone and wood with a preference for natural materials with colorations consonant with the natural landscape.
c) Walkways Through Vehicular Areas. At each point that the on-site pedestrian walkway system crosses a parking lot, internal street or driveway, the walkway or crosswalk shall be clearly marked through the use of a change in paving materials distinguished by their color, texture, or height.

ii. Vehicular Entrances. The overall Project Design shall include a minimum of two entrances to provide safe

ingress and egress from County Route 7 (Binnewater Road).

iii. Internal Vehicular Circulation
   a) Internal intersections shall have adequate sight lines, design geometrics, and/or traffic controls to minimize accident potential.
   b) Internal vehicle circulation patterns shall provide a clear and direct path to the principal customer entrance of the primary building, to outlying buildings, and to each parking area.
   c) Promote use of low-emissions and/ or alternative fuel vehicles on site for resort operation and maintenance.

iv. Truck Deliveries and Circulation. Truck delivery circulation patterns, to the extent practical, should be segregated from pedestrian and vehicular circulation.

6. Parking Layout and Design

a. Intent

Parking areas should be designed for a safe and orderly flow of traffic throughout the Site as well as for on-site stormwater management. Major circulation patterns within parking areas should be well defined with landscaped buffers and/or islands. Parking spaces along main circulation drives should be avoided. To the maximum extent practicable, dead-end parking lots shall be avoided.

b. Design Guidelines and Standards.

i. Number of Parking Spaces. Parking shall meet underlying zoning requirements as per §75-19 in terms of number of spaces required.

ii. Shared parking. Shared parking facilities should be encouraged.

iii. On-street parking. On-street parking may be allowed provided the street width is adequate to safely accommodate on-street parking and safe passing by Emergency Vehicles.

iv. Landscaping. Landscaping islands shall be incorporated within parking areas, except for parking at the maintenance area. Parking areas at the hotel, fitness center and wellness center shall include a landscaping island for every 15 to 20 parking spaces. Employee parking shall include a landscaping island for every 25 to 30 parking spaces. Landscaping islands shall include bio-friendly elements such as surface water retention swales, bio-gardens, “green” islands for trees and plantings, etc.

v. Low-Emission Vehicles. Priority parking spaces for commercial buildings shall be dedicated to low-emission vehicles. Charging stations for electric/ hybrid vehicles shall be utilized on site.
vi. Stormwater. Parking areas shall be designed to maximize on-site ground filtration of stormwater and shall include those of the following practices and techniques or other Best Management Practices as deemed appropriate and necessary for site specific conditions:
    a) Use of underground stormwater chambers to divert stormwater through impervious parking surfaces;
    b) Integration of stormwater practices in landscape islands to help treat stormwater runoff on site;
    c) Use of pervious paving blocks and/or pervious composite surfaces;
    d) Incorporation of compact car spaces to reduce impervious surface cover;
    e) Integration of green swale areas on the perimeter of parking lots to reduce stormwater flow;
    f) Use of shared parking among adjacent uses to reduce impervious surface cover.

7. Streetscapes

a. Intent.

The character of the streetscapes within the Site is critical toward creating the desired 'retreat-to-nature' experience of the resort community. Streetscape design should promote pedestrian circulation while maintaining natural landscaping and 'soft edges' between roadways, walkways and other developed areas. Streetscape design should promote a safe and visually attractive pedestrian experience.

See Appendix E-1 ("Streetscape Sections").

b. Design Guidelines and Standards

i. Roadway Widths and Surfaces. Design roadways to minimize impervious surface while ensuring safe internal circulation.
ii. Driveways and Parking Area Surfaces. Employ pervious driveways and pervious parking areas, except where topographic challenges or heavy traffic may require consideration of an impervious surface.
iii. Pedestrian Walkways and Recreational Trails. Employ pervious surfaces for pedestrian walkways, walking malls and recreational trails

iv. Wildlife. Minimize hard curbs to facilitate wildlife movement.

8. Landscaping and Screening

a. Intent.
Maintain the existing forested landscape that covers the majority of the Site by preserving existing trees to the extent practical. Limit tree clearing before, during and after construction. Plant vegetation that maintains a native landscape that visually ties the development together, defines major entryways, circulation and parking.

b. Design Guidelines and Standards
   i. Tree Clearing During Construction. The Project shall limit tree clearing during construction to a ten-foot perimeter around buildings and roadways plus whatever area may be necessary to ensure slopes do not exceed 3:1 grade. (See Section 1.b.iii.).
   ii. Tree Clearing Post Construction. The Project shall limit tree clearing post-construction through deed restrictions which shall include provision for removal of diseased trees or trees which may pose a safety hazard. No tree clearing will be permitted without prior approval from the Property Owners' Association and conformance with NYSDEC permit regulations to protect bat habitat (no tree clearing during period of April 1 through October 31.
   iii. Native vegetation. To the extent feasible, the Project shall plant native indigenous vegetation and remove exotic species where practical.
   iv. Landscaping for Stormwater Ponds. The Project shall follow NYS DEC Landscaping Guidance for stormwater ponds and bio-retention areas. See Appendix E-2: "New York State Stormwater Management Design Manual: Appendix H")
   v. Screening of Infrastructure, Mechanical Systems. Loading docks, truck parking, outdoor storage, trash collection, trash compaction, other service functions shall be incorporated into the overall design of the building and landscaping so that the visual and acoustic impacts of these functions are fully contained and out of view from adjacent properties and public streets. All mechanical equipment and utilities shall be screened. Screening materials shall be the same as, or of equal quality to, the materials used for the primary building and landscaping.

9. Lighting

a. Intent

Eliminate adverse impacts of light through spillover; provide attractive lighting fixtures and layout patterns that contribute to unified exterior lighting design of non-residential developments; and provide exterior lighting that promotes safe vehicular and pedestrian access to and within a development, while minimizing impacts on adjacent properties.

b. Design Guidelines and Standards

i. Exterior Lighting.

a) All existing exterior light fixtures on Site shall be removed.
b) Exterior lighting to conform to the International Dark Sky Organization's *"Simple Guidelines for Lighting Regulations for Small Communities, Urban Neighborhoods and Subdivisions".* See Appendix E-3.
c) Limit exterior lighting to minimum required for safety.
d) Use downward and/or shielded exterior lighting.
e) Employ cutoff fixtures and other energy efficient lighting technologies.
f) Use Light-Emitting Diode (LED), low-pressure sodium vapor lamps or other technologies that demonstrate low impacts on wildlife (bats).
g) Employ timers and motion sensors for area lighting around commercial buildings to limit the amount of time during the night that lamps are on.

ii. Interior Lighting.

a) Direct interior lighting downward and from windows and lakes
b) Limit lighting density for interior lighting and direct and shield interior lighting away from exterior areas
c) Employ automatic controls to turn off interior lights on regular schedules.

10. Signage.

See Master Signage Plan, Section I.B.6 of Master Development Plan Application.

C. *Sustainability Objectives*

The Applicant has created a sustainability matrix to set specific objectives (standards) and performance measures (indicators) for a range of environmental categories across the development timeline (planning and design; demolition and construction; long-term operation).

The sustainability matrix contemplates multiple categories; the Applicant will define specific goals and indicators during detailed design, prior to Site Plan approval.

- Energy (Efficiency, On-site Renewable Energy Production, Fuel and Transportation)
- Materials (Reuse, Recycling, Procurement)
- Ecology (Habitat protection, Wetland Conservation, Biophilic Design, Open Space)
- Water (Efficiency, Re-use, Watershed protection, Stormwater, Wastewater)
- Ambient Conditions (Greenhouse Gases, Noise and Light Pollution, Viewsheds)
- People (Community, Placemaking, Wellness, Indoor Environmental Quality)

The Applicant has drafted strategies for all categories and will refine these strategies and define specific indicators during the detailed design phase of the Project. Below is a snapshot of the sustainability matrix that outlines draft strategies for the water category (Efficiency, Re-Use, Water Conservation and Recycling, Watershed Protection, Stormwater, Wastewater).

Hudson River Valley Resorts: Sustainability Matrix

Snapshot of Sustainability Strategies for WATER

CATEGORIES	DESIGN AND PLANNING		CONSTRUCTION		OPERATION	
	Strategies	Indicator	Strategies	Indicator	Strategies	Indicator
Energy						
Materials						
Ecology/ Environment						
Water						
Efficiency	1. Require high efficiency fixtures and appliances				1. Zero or limited irrigation	TBD
Reuse	1. Grey water recycling for hotel	TBD	1. Native vegetation for landscaping	TBD	1. Rain-water harvesting	TBD
Watershed Protection	1. Central wastewater system	TBD			1. Ban chemical lawn/ garden treatments	TBD
	2. Design roads so run-off avoids critical habitats	TBD			2. Require low-impact road salts for snow	TBD
	3. Define strict tree clearing limits	TBD				
Stormwater	1. Pervious roadways, driveways	TBD	1. BMPs for Erosion Control	TBD		
	2. Green roofs	TBD	2. Construction sub-phasing of 5 acres or less			
	3. Narrow roadways	TBD				
	4. Minimize vehicular traffic on site with pedestrian focused design	TBD				
Wastewater	1. ISEL discharge limits	TBD			1. Management and maintenance by certified operator	
Ambient Conditions						
People						

D. Deed Restrictions (Restrictive Land Covenants)

Long-term environmental sustainability for the Project depends on enforcement of design standards and sustainability objectives. Resort staff, guests and home-owners must 'buy-in' to the value of adopting and conforming with these standards; then, effective measures to enforce implementation must be in place. The Resort Operator and the Property Owners Association will use marketing, education and programming activities to create a 'culture of sustainability' and to clearly delineate the means by which the resort community will pursue sustainability.

Sustainability practices in the hotel and spa that help achieve LEED certification for these buildings will be highlighted for resort staff and guests in information displays within the buildings as well as in educational brochures, etc. Homeowners will receive a *'sustainability prospectus'* which will include a description of all sustainability measures embedded in the home, restrictive land covenants (including deed restrictions) and homeowner sustainability responsibilities, including land management and solid waste management. Conservation land management practices, including protection of endangered species habitat and restrictions on land uses within the 500+ acres of land committed to Easement, will be highlighted on trail kiosks and in resort recreational program information.

Once the Project is built, the Property Owners Association will own common land and improvements and will be responsible for enforcing sustainability standards and deed restrictions for the commercial resort facilities, common land and residential lots. Deed restricted portions of residential lots shall be depicted as part of the application for subdivision approval. Deed restrictions will 'run with the land' such that changes in ownership of the resort operation or private homes will not 'dilute' the sustainability standards.

Legally recordable deed restrictions will be defined by the Applicant prior to Site Plan approval and will ensure certain land management practices are prohibited. Deed restrictions will apply to the operation of the resort and resort amenities, the use of trails and common land, and to private homes. Enforcement will be the responsibility of the Property Owners Association. Specific enforcement mechanisms, including fines and other penalties, will be defined within the deed restrictions.

The Property Owners Association (POA) will be formed as soon as there are property owners and will be administered by a Board composed of representatives of the Applicant, homeowners, and the Resort Operator. The POA Board is expected to be composed of volunteers with limited administrative costs. Funding will be required to create educational materials, draft specific legally binding deed restrictions, and oversee enforcement. Funding for the

administration of the POA will be derived principally from fees assessed to the homeowners and the resort operator and the collection of fines for the violation of the sustainability measures.

The Applicant believes that self-administration by a Property Owners' Association (POA) is an effective mechanism for long-term enforcement of sustainability standards and deed restrictions. Because deed restrictions 'run with the land' they are legally binding upon all property subject to them. In addition to a POA board (or committee typically set up for enforcement) any property owner has a legal right to enforcement of the covenants, including standing to bring suit in the court system. Moreover, the Applicant expects to retain rights until all or a significant majority of property is sold, to enforce the deed restrictions. It is also expected that the resort operator would be subject to, and have standing, to enforce the deed restrictions.

Furthermore, the Project is being marketed to customers who will value its core philosophies of environmental sustainability, protection of the environment and health and wellness. It is expected that these purchasers will highly value and respect the deed restrictions. With more than 100 property owners who are likely to strongly embrace the Project's philosophy, a developer motivated to preserve the community's core principles and a spa operator also having enforcement rights, it is expected that any significant violation of the covenants will be enforced.

Three specific deed restrictions will be implemented as a condition of the DEC Natural Resource Permit prior to the Site Plan approval process. These specific restrictions are designed to minimize impact to endangered bats and cover the following areas:

1. Wetlands: prohibition on disturbance to any state or federally delineated wetland or adjacent area except as shown on the approved plans;
2. Tree Clearing: limit tree clearing to the limits of disturbance shown on the approved plans; if tree removal is required for safety or to protect and maintain utilities and structures, then the time restrictions, as established in the mitigation plan, will apply. Tree removal must be limited to the time period specified in Section 5.3 of the Indiana Bat Mitigation Plan. Tree removal outside of the time restrictions will only be considered on a case-by-case basis if an authorized protocol for establishing the absence of endangered bats is accepted by the DEC and implemented by the Applicant;
3. Exterior Lighting: Exterior lighting shall be in conformance with the approved plans and will minimize light trespass and light pollution.

Additional deed restrictions/ restrictive land covenants that will be developed during the Site Plan approval process are listed below:

Resort and residential

- All tree-clearing must conform with DEC permit conditions related to the Indiana Bat Mitigation Plan and be approved by the Property Owner's Association
- Conformance with land use and development plan for Property, including lands protected under Conservation Easement
- Prohibition of motorized vehicles on water bodies or trails, except for emergency vehicles, trail maintenance or implementation of land use and development plan
- Restrictions on choice of landscaping products to favor to native and/or non-invasive vegetation
- Restrictions on use of traditional road applications for snow (road salt) to favor low-impact applications
- Prohibition of harmful chemical fertilizers and landscaping applications
- Mandatory recycling and composting

Residential

- Require conformance to exterior architectural design standards (e.g. natural building materials; color palette that conforms with natural environment; restrictions on objects attached to homes, garages; restrictions on objects placed on terraces, patios, etc. that, in the determination of the POA, create negative visual impacts)
- Limit tree clearing to maintain a specified % of natural forested landscape; tree-clearing by contractors approved by POA