Beyond Zero: Welcome to Carbon Neutrality

During this Beyond Zero Series event, Building Energy Exchange and NYSERDA welcome project experts who have creatively designed low-carbon, public-facing buildings that act as welcoming spaces for visitors and tourists and increase economic development in their surrounding communities.

Moderator
Ellen Zielinski, Vice President of Strategy Development, K02 Consulting

Speakers
Adam Yarinsky, Principal, ARO
Ben Fain, Owner & CEO, West Bridge Street Holdings LLC
Amy Weisser, Deputy Director, Strategic Planning and Projects, Storm King Art Center

July 21, 2022 | 9 to 10:30 am | 1.5 AIA LU|HSW
Building Energy Exchange | 31 Chambers St, New York NY 10007
Frederic Church Center
Olana State Historic Site
BEEX Beyond Zero Series
July 21, 2022
Frederic Church Center: Project Team

THE OLANA PARTNERSHIP

NEW YORK STATE OPRHP

ARCHITECTURE RESEARCH OFFICE
ARCHITECT

NELSON BYRD WOLTZ
LANDSCAPE ARCHITECT

DTS PROVIDENT
Civil Engineering

ALTIERI
MEP/FP Engineering/IT/Security

SILMAN
Structural Engineering

Specialty Consultants

JS CONSULTING ENGINEERS
Building Code Analysis

ELLANA
Cost Estimator

CONSPECTUS
Specification Writer

STAGES
Acoustical/AV

LIGHTING WORKSHOP
Lighting Design

ENCEMPASS ENERGY
Sustainable Design

CLEVENGER FRABLE LAVALLEE
Food Service
A HOLISTIC VISION OF CARBON NEUTRALITY

ORIENT
Visitors to Olana as an Interpretive Threshold

ENGAGE
Church’s Vision of Olana as a Work of Art Uniting Nature and Culture

STEWARD
Resources to Meet Present and Future Needs
A HOLISTIC VISION OF CARBON NEUTRALITY

ORIENT
Lengthen & Enhance Visitor Experience at Olana & in Region

ENGAGE
Connection to Church’s Reforestation at Olana

STEWARD
Embodied & Operational Carbon Neutrality
ORIENT

Visitors to Olana as an Interpretive Threshold

• Siting and Wayfinding
• Program Organization
• Building Form, Massing and Roofline
Frederic Church Center: Site Plan

Legend
1. Existing Entry Road
2. Bus Drop Off
3. Pedestrian Access
4. Arrival Terrace
5. Cafe Terrace
6. Amphitheatre
7. Lake View Terrace

Parking Lot
Frederic Church Center: Floor Plan

1. Entry/Ticketing
2. Multipurpose Room
3. Cafe
4. Cafe Prep
5. Office
6. Staff Room/Storage
7. IT Closet
8. Mechanical
9. Mechanical
10. Trash
11. Maintenance Storage
12. Restroom
13. Janitorial Closet
14. Storage
ENGAGE

Church’s Vision of Olana as a Work of Art
Uniting Nature and Culture

• Reciprocity between architecture and landscape
• Integrity of forms and materials
• Daylight and views
STEWARD

Resources to Meet Present and Future Needs

• Low Embodied Carbon
• Low Operational Carbon
• Sustainability & Resiliency
CARBON NEUTRAL: NYSERDA FUNDING

Low Embodied Carbon
• Mass Timber

Low Operational Carbon
• All Electric Mechanical Systems
• Solar Array
LOW EMBODIED CARBON: MASS TIMBER

- First Public Building In New York State Using Mass Timber
- SUNY College of Environmental Science & Forestry Sustainable Resources Management Group
- Frederic Church’s Forest Restoration at Olana
LOW OPERATION CARBON: ALL ELECTRIC MECHANICAL SYSTEMS
Sustainability & Resiliency

- Cross-laminated timber (CLT) construction
- Insulated bird-friendly glazing
- CLT and stone regionally sourced
- Exposed CLT wall finish
- Exposed architectural grade glulam beams
- Recycled and rapidly renewable materials for interior finishes
- Low-VOC finishes
- Electric air to air variable refrigerant flow (VRF) heat pump system for heating/cooling
- Energy Recovery Ventilator (ERV) for outside air
- Electric heat pump hot water condenser for hydronic radiant floor heating
- Access to natural daylight and views
- High-efficiency LED light fixtures
- Integrated lighting and automated window shading system
- Low-flow toilets and fixtures
- Bioswales for stormwater management at parking lot
- Responsibly restore the ecology where site disturbance is required
- Utilize native planting to achieve woodland restoration goals in SLDP
CATSKILL GATEWAY: PROJECT SCOPE

For the Village of Catskill, these projects will contribute to the dynamic community revitalization underway. Offering amenities and activities for visitors and residents alike, the varied businesses will provide new opportunities for all to enjoy, to discover the bounty of New York State – agricultural, artisanal, and cultural. The varied businesses, and especially the hotel, will also serve close neighbors Foreland and the Lumberyard, offering cooperative amenities and mutually support each others’ activities.

THE THREE BUILDINGS WILL BRING DYNAMIC, STREET FRONT ACTIVITY TO TWO MOST CENTRAL BLOCKS ON MAIN STREET, BREATHING NEW LIFE AND ENERGY INTO CATSKILL'S HISTORIC DOWNTOWN AND SERVING AS ANCHORS TO THE EXPANDING REVITALIZATION UNDERWAY IN CATSKILL.
329, 331, 335 MAIN STREET

With plans for a Grab+Go market and bakery in 329-331 storefront spaces and a cafe/community space in the 335 street front, these buildings will serve as an unofficial welcome center to Catskill, where visitors will be able to stop in and hang out as they start their Catskill visit.
329, 331, 335 MAIN STREET

The upper floors of the three buildings will be transformed into a 25-room, select service hotel (leased to local operators, with less than 10 direct employees total planned). There are currently no hotels in the Village of Catskill.

LOCAL NEIGHBORS FORELAND AND LUMBERYARD ARE SUPPORTIVE AND EAGER FOR A HOTEL

THE HOTEL ALREADY HAS A NEAR GUARANTEED 50% OCCUPANCY TO SERVE THE MORE THAN 45 EVENTS TO BE PRESENTED EACH YEAR AT FORELAND AS WELL AS 15+ MAJOR FILM PRODUCTIONS AT LUMBERYARD.
335 MAIN STREET
BANK BUILDING

The Bank Building will become home to Bills, a bookstore, cafe and community space, and After Hours Publishing, a literary press that works with NY authors and writers will host readings, lectures, book sales and a community work space. The space will be open every day, for business and community.
ENERGY SYSTEM

To achieve Carbon Neutral energy performance with zero fossil fuels used, CATSKILL GATEWAY will combine extensive renovations to fully insulate the two buildings with new renewable energy systems. Renovations will focus on insulation and weatherization to completely seal the thermal enclosures of the two buildings and allow efficient energy use.

This innovative project will create one of NVS’s first-ever net-zero hotels. To power the planned activities in the 329-331 Main Street buildings, the project will install new solar arrays, totalling 368 kW, split between the buildings and an adjacent site nearby. This will offset all electric loads and achieve net zero energy performance, powering the estimated 468,800 annual kWh energy consumption for all activities planned at 329-331 Main St., plus an additional 50 kW array (outside of this application budget) to power a portion of activities in the Bank Building at 335 Main St. This will ensure that the entire CATSKILL GATEWAY campus is supported by green energy. CATSKILL GATEWAY will offer numerous opportunities to educate visitors, residents and, most vitally, peers in the industry, on the limitless potential of clean energy—inspiring them to think more broadly, urgently, and creatively about implementing clean energy actions to benefit our environment and communities.
“a restorative dose of nature and culture”
—The New York Times (July 2020)
Storm King Members

3,700 at present
Work

One of the “6 Best Public Sculpture Parks to Visit This Spring and Summer” —Architectural Digest (May 2021)
2018 Economic Impact Study

$8.5M
visitor spending in region

142
regional jobs supported due to Storm King visitation
“Storm King Art Center in New Windsor is a must visit...for bringing wows at every turn with its large-scale works and breathtaking views.”
—The Washington Post (April 2021)
Attendance Projections

Season opened in July
Peak weekend overflow parking
Enhance the Visitor Experience

Advance Our Leadership in the Field of Art in Nature

Protect our Art, Landscape, and People
Remove traffic from the visitor experience by locating parking and service-intensive uses at the site’s edge.

Activate the whole site by expanding activities and amenities to the south.

Create new opportunities for art by returning land to landscape.
WELCOME SEQUENCE

NEW LAND FOR ART

CONSERVATION, FABRICATION, AND MAINTENANCE BUILDING
Design Storm King infrastructure in a way that allows for future growth, new revenue generation, and operational flexibility.

Minimize maintenance and operation costs.

Create a working environment that visibly and transparently promotes the health and happiness of staff, tailored to the unique operations at Storm King.

Provide a strong connection between buildings, infrastructure, and nature.

Be transparent in our building and site operations to encourage best practices internally and inspire visitors to achieve the same.

Energy/emissions: progress toward carbon neutral operations.

Protect and conserve natural water resources.

Increase awareness about programming, history of the site, and values and cultures of the region.

Ensure that onsite transportation does not negatively impact the visitor experience.

Facilitate visitorship by developing affordable, accessible, and safe means of getting to Storm King.

Enhance the ecological value of the site through the protection of local plant and animal species.
1. Create Comfortable & Accessible Outdoor Experiences
2. Build Only What is Necessary
3. Design for Efficiency
4. Use Sustainable & Durable Materials
5. Support Biodiversity & Site Hydrology
6. Enhance Storm King Mobility
STORM KING GROWTH PROJECTIONS
Walking into landscape for art
Thank you!
discuss.

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thank you.

building energy exchange