Jay Heritage CENTER
American History & Education on the Sound

STEWARDSHIP THROUGH SMART CHOICES

as of March 1, 2017

SPONSORED BY: conEdison

Beyer Blinder Belle Architects & Planners LLP

SUSTAINABLE SITE DEVELOPMENT

GOAL	PURPOSE	RESTORATION ALREADY DONE	FUTURE RESTORATION
Construction Activity Pollution Prevention	During construction, prevent loss of soil by storm water runoff and/or wind erosion; prevent sedimentation of storm sewers or receiving streams; and prevent air pollution with dust.	Sediment from well drilling and trenching was kept out of storm sewers and natural areas using straw bale and geotextile barriers. Exposed topsoil was seeded.	Reactivate existing dry well drainage for exterior equipment washdown. Landscape and stone wall restoration will be fenced. Reuse old interior farm road and access gates to minimize impact on neighbors.
Site Selection	Avoid the development of inappropriate sites. 	The restoration allows for the reuse of an existing developed site without adverse impact to any of the restricted categories. Work follows rules for SEQR including archaeology.	Relocate existing parking closer to Boston Post Road in small pocket lots. Eliminate automobile runoff from impacting nearby stream. Rehabilitate and repurpose pre-existing intrusions like pool.
Brownfield Redevelopment	Rehabilitate damaged sites and reduce pressure on undeveloped land. 	Extensive abatement of asbestos-containing materials found in plaster, pipe insulation, and vinyl floor tile adhesives was completed per stringent state and federal regulations.Over 400 tons of construction debris dumped on the property was removed. Buried oil deposits excavated and removed with stringent monitoring of ground water impact	Remediated dumping sites will be replanted as orchards and open green space. 
Alternative Transportation	Reduce impacts of automobile use by providing facilities for bicycle users, encouraging use of low emission and fuel-efficient vehicles, limiting parking, and encouraging carpooling	Bicycle racks for visitors and staff were installed at the visitor center. 	Provide outdoor showers and water fountains for cyclists. Designate preferred parking spaces for LE/FE vehicles and carpools/buses. Limit new parking area size to local zoning requirements. Add more bike racks at strategic locations. Widen paths for strollers and wheelchairs.
Protect or Restore Habitat	Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity. 	Jay Heritage Center has removed invasive plant species choking the historical landscape in consultation with LHPRISM (Lower Hudson Partnership for Regional Invasive Species Management). Plans for restored gardens and meadow have been created by Nelson Byrd Woltz Landscape Architects and Larry Weaner Landscape Associates and include native or adapted vegetation.	Add back elm allee between Mansion and Carriage House using disease resistant cultivars like Liberty or Princeton elms. 
Stormwater Design	Limit disruption of natural hydrology by reducing stormwater quantities and improving the quality of stormwater runoff.	The amount of hardscape has been reduced by converting over 1,000sf of the Drying Yard surface from impervious pavement to water-permeable gravel with a geotextile base.	Replant orchard in its historic location at existing parking area, and build new parking lot with natural biofiltration of runoff. Capture rainwater from roof in new cistern, buried in Coal Vault, and use for irrigation or for flushing toilets.
Light Pollution Reduction	Increase night sky visibility and reduce development impact on nocturnal habitat.	New permanent exterior lighting uses full-cutoff fixtures (no illumination above 90 degrees from nadir).	Install interior lighting controls to automatically turn lights off during non-business hours. Limit new exterior lighting to that required for safety, comfort, and minimal illumination of the facade.

RESPONSIBLE MATERIALS USE

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Building Reuse	Conserve resources and reduce waste.	The restoration will maintain over 90% of the existing material fabric of the building, including irreplaceable resources such as massive chestnut structural timbers, teak flooring, marble floor tiles, uniquely shaped glazed ceramic wall tiles, and numerous original interior and exterior elements made from old-growth eastern white pine.	Reuse second floor of Mansion for teaching classrooms, offices, artists and writers ateliers, and library. Convert basement kitchen to archaeology laboratory. Restore Tennis Building for active use. 
Construction Waste Management	Divert construction waste from disposal in landfills and incinerators, and recycle recovered materials.	Construction waste from the restoration was sorted off-site and appropriate materials separated for reuse or recycling.	
Materials Reuse	Reduce demand for high-value virgin building materials and reduce waste.	Countless exterior and interior ornamental elements have been salvaged, restored, and reinstalled in their original locations, including the portico columns, cedar window shutters, cast plaster cornices, carved wood moldings, and cast "compo" ornamentation. Some details, such as the top of the center window casing in the Dining Room - which retains some of the room's earliest period finishes - and one of the cast iron grilles from the third floor windows, have been salvaged and reinstalled at new locations within the building for interpretive display. False pediment on south facade reinstalled.	Additional salvaged elements to be restored and reinstalled will include veranda columns and railings. Teak flooring and ceramic wall tiles removed to create new door and ductwork openings will be salvaged and reused to patch gaps in other locations. 
Recycled Content	Reduce impacts from extraction and processing of virgin building materials.	New structural beams and columns in the building incorporate 98% recycled steel. New structural concrete in the building incorporates 21% post-industrial blast furnace slag by dry weight.	Additional materials with recycled content used in the restoration may include concrete block in basement structural upgrades, gypsum wallboard to replace plaster walls and ceilings removed during asbestos remediation, roof insulation, toilet partitions and stone or ceramic tile flooring in the new first floor bathrooms, etc.
Local/ Regional Materials	Support the use of indigenous resources and reduce impacts resulting from transportation.	Local and regional materials used in the restoration to date include the tile in the bathroom, Portland cement and coarse aggregate in the structural concrete, and landscaping materials used to regrade and fill utility and structural excavations.	Additional local or regional materials used in the restoration may include the marble for the Dining Room fireplace mantel, the glass in reproduction window panes and mirrors, gravel for the Drying Yard, crushed stone for the restored rear yard path, replacement ceramic wall tiles, etc.

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RESPONSIBLE MATERIALS USE (continued)	**Rapidly Renewable Materials**	Reduce the depletion of finite raw materials.		Non-historical millwork, including new cabinetry planned to house HVAC equipment on the third floor, can incorporate panels made from agrifibers such as sunflower seed shells or wheat chaff.
	Certified Wood	Encourage environmentally responsible forest management.		Further restoration will incorporate extensive new wood materials throughout the building's interior and exterior, many of which can be purchased from FSC-certified sources.
	Interior Air Quality Performance	Enhance indoor air quality.	Windows and an exhaust fan will continue to be used to ventilate the second and third floors with fresh air until the HVAC system is completed.	Retrofit the completed HVAC system with additional sensors and controls to maintain minimum outdoor air ventilation rates.
INDOOR ENVIRONMENTAL QUALITY	**Environmental Tobacco Smoke Control**	Prevent exposure of building occupants and systems to tobacco smoke .	Smoking is prohibited in the building and within 25 feet of entries, air intakes, and windows.	
	Construction Indoor Air Quality Management	Reduce indoor air quality problems resulting from the construction process.	The HVAC system was not used and ductwork openings were sealed throughout the construction process to protect the system from dust. Construction materials were stored within the building to prevent exposure to moisture.	The building was flushed out after completion of Phase I renovation by leaving windows open for at least two weeks during mild weather with no more than 60% relative humidity. 
	Low-Emitting Materials	Reduce the quantity of indoor air contaminants.	Whenever possible use adhesives, paint, carpet, and composite wood and agrifiber products, and other materials with low-VOC and chemical components and no added urea-formaldehyde resins.	
	Indoor Chemical & Pollutant Source Control	Minimize exposure of building occupants to potentially hazardous particulates and chemical pollutants.	Offgassing from stripping, cleaning, and painting during the restoration was exhausted directly to the exterior using fans and operable windows.	Provide floor mats at all entries, and clean weekly. Retrofit the completed HVAC system with improved air-supply filters. Janitorial areas, if any, will be exhausted directly to the exterior.
	Thermal Comfort	Provide a comfortable thermal environment.	The interim HVAC system has been designed to provide thermal comfort conditions year-round on the first floor, the only floor open to the public.	The complete HVAC system has been designed to provide thermal comfort conditions year-round to all parts of the building regularly open to the public. A central monitoring system will verify indoor temperature and humidity levels.
	Daylight & Views	Provide a connection between indoor spaces and the outdoors.	All regularly occupied spaces in the building, with the exception of service halls and corridors, have large windows providing substantial daylight and direct views to the exterior.	Verify daylighting levels using daylight sensors to provide direct measurements and control lighting.

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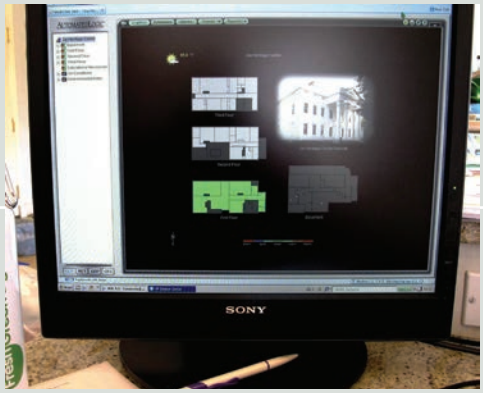
WATER USE	**Water Efficient Landscaping**	Reduce potable water consumption for irrigation.	The Jay property has no permanent landscape irrigation systems. 	Plant native or adapted species that require minimal irrigation. Irrigation can use captured rainwater.
	Water Use Reduction	Maximize water efficiency.		Use water-conserving fixtures and use captured rainwater to flush water closets.
ENERGY USE	**Commissioning of Energy Systems**	Verify the accurate installation and optimal performance of the building's energy related systems.		Contract with a third-party commissioning authority once all systems are complete. 
	Refrigerant Management	Reduce ozone depletion by CFCs and minimize direct contributions to global warming by HCFCs.	The water-source heat pumps that convert heated or cooled water into heated or cooled air use chlorine-free HFC-410A refrigerant, which has no ozone depleting potential.	
	Optimize Energy Performance	Reduce environmental impacts associated with energy use. 	The ground-source heat pump system provides heating and cooling with minimal energy input. A computerized central monitoring and control system optimizes efficiency and raises or lowers temperature set points when the building is not in use. All HVAC equipment is highly efficient, including variablespeed water circulating pumps, multiple-speed water-source heat pumps, lowspeed hydronic fan coil units, and condensing boilers. Compact fluorescent light fixtures provide high-efficiency, long-lifecycle lighting in non-historical spaces such as the basement.	Retrofit the HVAC system with heat-recovery systems for exhaust vents. Install daylight and occupancy sensors to control interior compact fluorescent lighting in non-historical spaces and exhaust fans in bathrooms. Purchase only EnergyStar appliances. Install removable interior storm windows on second and third floors to improve thermal performance without compromising historic exterior. Insulate the roof to reduce building heat loss. 
	Measurement & Verification	Provide for ongoing accountability of building energy consumption over time.	The central monitoring and control system wil be used to track energy use and evaluate energy system performance on an ongoing basis. 	
	Green Power	Encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.		Purchase electricity from renewable sources such as solar, wind, biomass, or low-impact hydro.
	Storage and Collection of Recyclables	Facilitate reduction of waste generated by building occupants.	An area of the basement has been designated for collection and storage of recyclables.	