HVAC and the Historic House: or How I Learned to Stop Worrying and Love the Chaos

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How do you prepare for a project at your historic house?

- Assemble your project team early and budget for their long term involvement
- Study and understand the history and condition of your site/house*
- Study and understand the history of the system you are looking to replace*
- Try to connect as many ancillary projects as possible as early as possible
  AKA: “Well...as long as we have the walls open...”
- How will you pay for the project?
- Evaluate risk to collections and historic structure (constantly revisit)
- Leave time on both ends of project for moving out and moving back in
- Think about the construction schedule early before the project begins, include all departments, and build in padding*

* What you think you know will probably change once you start opening the walls.
The Team

• Dumbarton House Staff and Board:
  Executive
  Curatorial/Collections
  Education
  Facilities
  Events
  Development

• Preservation Consultants

• Architects

• Engineers
The history of the site

c. 1870

c. 1890

c. 1922

Post 1931
History of the site (continued)

1991 Construction of Belle Vue Room, offices, and East Park
The history of the system/project

• 1991 installation of chiller and ductwork for central air system
• 1992 installation of a new chiller
• 2010 replace chiller compressor (August)
• 2013 replace chiller compressor (August)
• 2014 replace chiller compressor (August)
Grant Awards

- 2012-2013 – NEH Sustaining Cultural Heritage Collections: planning grant to evaluate current system and provide recommendations
- 2015 – National Trust: Dorothea de Schweinitz Fund for DC Preservation, test well geothermal analysis
- 2015-2017 – NEH Sustaining Cultural Heritage Collections: implementation grant based on findings from planning grant
- 2016 – IMLS Museums for America: grant to renovate collection storage
- 2017 – DC Commission on Arts & Humanities (Facilities & Buildings): HVAC work related to windows
Preparing for the move of the collections

• Packing individual items
• Palletizing the boxes
• Slow and methodical approach
Related projects
Budgets

- 2013 – Life Cycle Cost Benefit Analysis Budget
- NEH 2014 – Preliminary Budget
- 2016 (June) – Construction Manager Preliminary Budget
- 2016 (July) – Construction Mgr Permit Drawing set Budget
- 2016 (Sept) – Construction Mgr Bid Drawing set Budget
  - Mechanical cost up 300% from previous budget
- 2016 – New Design Budget
Managing the previous projects
Chiller is disassembled and thrown in dumpster by hand.
Old ductwork
Upstairs window sill damaged by long term water infiltration, discovered during HVAC project/window conservation
Keep in constant contact with the various project team members.