

PARTNERS

UNICO Contractor

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National Trust for Historic Preservation

1785 Massachusetts Ave. NW
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The Unico System is designed to fit. It's ideal for heating or cooling buildings with:

- Electric Heat
- Hot Water Heat
- Chilled Water Loops
- Steam Heat
- Radiant Floor Heat
- Inadequate or No Ductwork
- Limited Space
- Inadequate Cooling on Upper Levels
- Baseboard Heat
- Radiator Heat



Outside view of home

Overview

Originally built in 1849 by German tailor William A. Petersen, this standard looking row house would end up playing a part in one of the saddest days in American history. The home is located at 516 10th Street NW in Washington, D.C. and sits directly across the street from Ford's Theatre. This is the location where President Lincoln was shot by John Wilkes Booth on April 14th, 1865. After the President was shot, he was carried to the Peterson house and put into a back room so that doctors could care for him. Despite their best efforts, he succumbed to his wounds the next morning.

In 1896, the US government purchased the house, and since 1933 the National Parks Service has preserved the home as a museum. Although all of the original furniture has either been lost or stored in other museums, the home has been renovated and furnished with period pieces. It is currently open to visitors for tours.

Strategy

Despite the home's period appearance, it does feature one upgrade that makes it far more comfortable for visitors today: The Unico System central heating and air conditioning system. The Unico System is also installed in President Lincoln's cottage, and Unico is proud to be a partner with the National Trust for Historic Preservation. There are several reasons why the Trust partnered with Unico as the HVAC provider for projects. First, historical

renovation projects are typically concerned with preserving the original structure as much as possible. Conventional systems generally require that soffits be added, or parts of the structure to be removed completely to accommodate ductwork. The Unico System's small ducts allow the contractor to snake them through tight wall cavities with very little to no disruption to the wall itself.

Second, the modular design of our units enable them to fit nearly anywhere, such as crawlspaces or closets, again minimizing any renovation to the structure. Furthermore, the comfort provided by a Unico System cannot be matched. By reducing indoor humidity better than other systems, ours allows customers to set the thermostat higher, yet it still feels as comfortable as if it was set several degrees lower, resulting in better efficiency. Additionally, the aspiration effect utilized by high velocity systems completely diminishes drafts and improves mixing within and between rooms, leading to increased comfort throughout the building. All of these factors are perfect for historical renovations such as the Petersen house.

Unico, Inc. was originally contacted by Vanderweil, an engineering firm, hired by the project architect whose specialty is historic preservation. Unico, Inc. worked very closely with Vanderweil and provided the material list and complete duct design for the home.

The house needed several systems. One 3-ton and two 5-ton units were installed. The systems consist of standard Unico A/C coils paired to the appropriate blowers, as well as hot water coils for the winter months. The hot water coils are also used for reheat. The reheat is used for dehumidification when there is no call for cooling. In this mode of operation, the A/C is on which will dehumidify, but it also cools the air; which then needs to be reheated to prevent the air from getting too cold. The blowers are Unico Green Series, which feature a true E.C. motor, are very energy efficient, and also remarkably easy to program. With this system, the contractor can set the airflow for exactly what the area requires, reducing energy consumption and saving even more money. Unico outlets are painted to match interior schemes and blend in very nicely.

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Results

The project managers, engineers and architects are very pleased with the system. It's important that a place that carries this much historic value remains as it was in order to teach future generations, but it's important to keep them comfortable as well. The Unico System certainly does.



View of one of the painted outlets



Unico Green Series units



Outdoor Condensing units



Supply ducts coming off main plenum



Unico blower and coils in attic