The Unico System®

Small-Duct Central Heating & Air Conditioning

Historic Renovation Case Study: *Minneapolis, MN*

PARTNERS

UNICO Contractor

Midland Heating and Cooling 413 W 60th St Minneapolis, MN. 55419 612-869-3213 www.midlandhtg.com



Above: Outside of facility

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

Overview

An alternative to hospitals for expecting mothers, the Minnesota Birth Center provides a more comfortable home based environment, while offering the same type of care one would receive if they had gone to the hospital. This is becoming a popular choice of mothers around the country, mainly because the average cost of giving birth in a center such as this is 40% less than a hospital. The other benefit is that these facilities provide a much more comfortable setting for mothers. The center has two birthing rooms, a family waiting area and several other rooms for the staff so that they can be there to provide constant care for both mother and child.

Building this facility out of a 100 year old three story building certainly didn't come with out challenges. The home was completely gutted and remodeled to create a more modern feel, which of course meant installing central air conditioning. The owner of the facility didn't want to disturb the historic feel of the building with large ductwork though. For this, Midland Heating and Air Conditioning were brought in because of their innovative solution for the HVAC—The Unico System.

hot water coil as well as a cooling coil. The hot water coil is connected to a 93% efficient boiler which is the main source of heating. Midland installed a Lennox outdoor heat pump for the Unico blower and cooling coil.

By using The Unico System, they were also able to utilize MERV 16 filters, which are used by hospitals to filter out many different types of viruses. With a conventional system, they would have had to oversize the system just to push the air through this very tight filter, resulting in much larger ducting. Midland also installed a HRV in order to supply fresh air into the building as well.

Results

The owner of the center is very appreciative of what The Unico System has been able to accomplish for them. Midland and Unico made it possible for the home to retain the original charm, but keep the patients comfortable in a healthy environment. And with an estimated 200-250 mothers expecting to come through this year, it's important that they be comfortable.



Unico outlets in sidewall

BBCAT

Unico blower and coils with boiler

Strategy

Because of The Unico System's small diameter supply ducts, Midland was able to fish them all through the 2x4 interior walls, while the main trunk lines were hidden in the ceiling. They used a total of 45 outlets that had predetermined locations from the architect in charge of the project, with counseling from Midland. Midland used a Unico 5 ton blower matched with a

